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The American Journal of Clinical Medicine

A MONTHLY JOURNAL

DEVOTED TO ACCURACY, DEPENDABILITY AND HONESTY IN EVERY DEPARTMENT OF MEDICINE AND TO THE SAFEGUARDING OF THE DOCTOR

GENERAL EDITORIAL STAFF:

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EI

Let Us Get Right Down to Business..... 629
Emetine in Dysentery..... 629
Accuracy of Diagnosis is Possible for Every Physician 630
Dr. Victor C. Vaughan.—'Ware the Green Apple .. 632
Semper Paratus..... 633

Infant Stools..... 634
Babies' Colic..... 635
Vacation Accidents..... 636
Antinarcotic Legislation by Congress..... 637
Clinical Evidence..... 638

LEADING ARTICLES

How do Purgatives Act? PETTEY..... 639
Emetine in Amebic Dysentery. ROEMER..... 645
Spondylotherapy: A New Therapeutic Method. BOND..... 650
How I Treat the Gastroenteritis of Childhood. BRISTOW..... 654

Save the Babies. BLANCHARD..... 656
Infantile Colic. WOLVERTON..... 659
Cystoscopy and Ureteral Catheterization. MOORE. 663
The Treatment of Rhinophyma. FISCHKIN..... 664
Milk and Its Care for the Baby. LYNCH..... 666

(Table of Contents Continued on Page 2)

Physicians' Patients

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The American Journal of CLINICAL MEDICINE

Vol. 20 JULY, 1913 No. 7

Septicemia—Shall We Hope?

SEPTICEMIA! With what a sense of utter helplessness and blank despair the very word used to fill—or rather, empty—our souls! And while we were wont, if we were sympathetic men as well as doctors, to talk encouragingly and hopefully to the patient and his friends (especially to the friends), yet in our heart of hearts we knew that the doom had been read in the mere diagnosis of blood-poisoning, and that all of our busy activities in the way of medicines and bathings and what-not were nothing but the stout refusal of the brave warrior to lay down arms even to a forlorn hope—not that they made it any the less a lost cause.

It seemed for a time that all the additional knowledge we gained about the nature and behavior of septicemia made it just that much more terrible and hopeless. But knowledge is always power—eventually. And gradually, out of our better and more intelligent acquaintance with the actual processes involved in this dread condition, which at first seemed only to render it more terrifying and paralyzing, science wrested, almost literally by blood and tears, the secret of how to combat and conquer it.

Not that these septicemic conditions are by any means vanquished yet, or that they have ceased to be terrible. No one who stands (as I have stood for the past week) in the presence of a severe streptococcic infection is in any danger of belittling their gravity. Nowhere, I think, in the whole realm of clinical medicine, does one have such a sense of the appalling awfulness of the foe he has to fight, as in the face of these elemental blood infections. And the more he knows about them, the less he is likely to underestimate the enemy's strength or to belittle the gravity of the situation. Those who talk lightly of blood infections, even in these modern days, are the men who have never measured their forces with them.

But at least the physician need not, nowadays, throw up the sponge at the first gage of battle; he need not even stage a sham shadow-contest; he can put up a real fight. Modern science has put into his hands the weapons with which, in kind at least, he can oppose the dread condition adequately, intelligently, and often successfully. Not always successfully, of course, for even though one knows all the strategy of the enemy, and has attack and defense provided for at every point, one cannot insure the outcome of the struggle. But at all events such knowledge and such armament give him an equal fighting chance, the like of which he did not have in former days.

This knowledge has been attained for us by our biologic laboratories, and these armamentaria furnished us in the shape of the biologic therapeutic products, the bacterial serums and vaccines, especially the latter. In the bacterins we have a weapon which puts us on an even footing with the infections we are combating, and enables us to fight them on their own ground—to carry the war right into their own country, as it were.

We are no longer compelled to oppose minute guns with old-fashioned archery and wicker-work shields. It is no longer an unequal

test of equipment, but a free, fair, and comparatively equal test of strength; a real conflict, in which the physician may justly feel that it is anybody's fight until the very last drop of the hand, in which he will not infrequently find himself the victor, and even when he is beaten may experience the satisfying conviction that he fought intelligently and well with the odds of strength against him.

Of course armamentaria are not everything. The man behind the gun is a factor, and there is no doubt that the employment of biologic therapy will become more and more efficacious and successful as we learn to apply it more intelligently and tellingly. R. W. Allen, of London, who is perhaps the greatest living clinical authority on the subject, declares that "personally, I have never lost a single case of septicemia, although called in in several instances as absolutely a final hope, and regard this class of cases (i. e. general septicemia) as the most easily managed in the whole domain of bacterial diseases, and the one in which above all hope should never be abandoned as long as the patient is alive."

This seems to us like an extravagantly optimistic position—and yet, perhaps, when we are all as expert in the use of serums and bacterins as Dr. Allen, it may prove not to be so very much overdrawn after all. At all events, Dr. Allen's statement, and his whole experience with these products, emphasizes the concluding lesson of his assertion, that hope (and, let us add, effort) should never be abandoned as long as the patient is alive.

One of the most striking and significant points brought out by Dr. Allen in his book on "Vaccine Therapy" is the fact that general septicemia is not, of itself, the dangerous or fatal factor, but rather the localization of infection. "I do not believe," he says, "that bacteria circulating, or even multiplying, in the blood and the blood alone are capable of killing. Death takes place from toxic absorption from a localized focus or foci of infection, whether in the lung, or the heart, or the uterus, or the peritoneum."

We may add, further, that even then it is not the bacteria which directly produce death, but the physical damage suffered from the toxins by these local organs and tissues. This is in accordance with what has long been clinically known concerning infections, that patients (especially children) react well to general infections but badly to localized ones.

"It therefore follows," continues Allen, "that, on the possibility of dealing adequately with these foci, of eliminating further toxin absorption, and of facilitating the elimination of toxin that has already been absorbed, lies the essential to a successful issue, and the success that attends vaccine treatment is in direct ratio to the aid it renders these processes."

No doubt this is the keynote to the clinical phase of vaccine therapy, and represents the point of discrepancy between theory and practice which is so often encountered and which must necessarily continue to be encountered in more or less degree. Every therapeutic agency has its own peculiar point of discrepancy between theory and practice. But this does not in any way invalidate its general value and utility; and as experience teaches us how better and better to meet this point our success with vaccine therapy will grow more frequent and more complete, just as has already been the case with medicinal agents.

Dr. Allen speaks of his success even in cases where he was called in as a final hope. Such delay is, of course, not cited as a pattern, but as a warning. With bacterins, as with all other forms of treatment, the chances of success are directly in proportion to the earliness with which it is instituted. Better results are, as a rule, obtained when the bacterins are supplemented by the use of large doses of antitoxic serum, the bacterins stimulating the cells to a production of antibodies much more effectively if the patient's toxic condition is first relieved by the use of serum.

Meanwhile, do not forget the vital therapeutic significance ot those elementary principles so long advocated in these columns: in septicemia, as in all infectious diseases, eliminants, intestinal antiseptics, cardiac and nervous stimulants, and general and cellular tonics, are usually indicated—and the fighting physician will have them all constantly in mind.

Try planning your work for one month, and note the results. Then paint in imagination the results of twenty years of working according to a plan.

OUR ARTERIES

A man is "as old as his arteries"? Yes, but how old are his arteries? As old as the man is in years? By no means necessarily so.

Our bodies are full of little peculiarities, many of which are unknown to us. They are inheritances from a long line of ancestors: Wise little provisions of nature, adaptations, safeguards, developments, resistances, suitable for conditions many of which no longer

exist, having become obsolete by the change of customs and manner of living. A fair example is afforded by our arteries.

In our Freshman year we learned that the arteries are elastic; that their coats contain a proportion of elastic fibers. Why?

Our tree-climbing progenitors were subject to many vicissitudes, as were their cave-dwelling successors, their hunting, herding, farming descendants. At times food was plentiful and they gorged; at other times it was scarce, and they starved. Some times they were sated and safe, and enjoyed the luxury of sloth as only they can do to whom rest is rare. Many times they could escape death only by exertion such as touches the limit of the humanly possible. Frozen by cold, baked by heat, parched with thirst, then again reveling in cooling wazers, they endured every extreme compatible with continuance of life. In times of scarcity the hunger-belt was drawn tight, and the half-filled arteries shrank to the caliber demanded by their scanty contents. In the day of excess, the vessels widened to the limit, to make room for the floods pumped in by the powerful heart beats. The exercise of contraction and dilatation, for which they were adapted, kept these vessels in good health; as any part of our organism is maintained in health by adequate exercise.

Tie up a limb and the tissues wastes, the joints stiffen, the muscles degenerate. Disuse any function, and the part decays. Why except the artery? In these piping times of peace, we have no vicissitudes. Mr. Businessman never goes hungry, never eats or never drinks too much, never exerts himself enough to flush his face disagreeably or set his lungs panting, never strains himself in any way. His arteries never contract or dilate, but remain uniformly of the same dimension. Then, as mid-age approaches, Mr. Businessman wonders at finding his vessels' walls degenerating, his arteries hardening; and then, if he does put upon them a sudden and tremendous strain, he falls dead, because by disuse his blood-vessels have lost the power of adaptation to needs. And then the wise men put the blame upon "the sudden strain," and his brethren solemnly resolve never to permit themselves such perilous efforts.

But death was not owing to the strain, it was from the lack of straining.

Don't be too regular in your habits. Drink all the water you can for a week, then partake of as little as possible for another week. Eat corporation-dinners sometimes; once a month fast for a whole day. Get out with the boys and play ball once a week. Take a few days in the harvest-field or at mountain climbing—a grand strain for the circulation. Tyndall spoke glowingly of his Alpine climbs. Give your vessels their due exercise, and keep them young.

The rat's teeth are designed for gnawing, and as they wear down are reproduced by growth. Shut a rat up so that it can not gnaw, and the teeth continue to grow, until at last, it is said, they close the mouth. The shod horse must have his shoes removed once a month and his growing hoofs pared down. The soles of our own feet are reproduced so rapidly that those who go barefoot suffer less than those who wear shoes. Etcetera, etcetera—examples without number.

I have found three types of men in the medical profession. There are the muckrakers, not in the modern signification of that word, but with its classic definition from Bunyan, the fellow whose sole purpose is the raking together of dollars, no matter how dirty; the wooden-headed mechanic, mechanically working at the trade of medicine; and the true professional man, the high priest of purity, serving at the altar of clean, sound manhood and womanhood for the "healing of the nations."—Dr. G. Henri Bogart.

THE PROBLEM OF NUTRITION

Samuel D. Gross used to say that were he teaching therapeutics, he would begin by showing his class how to cook a beefsteak. *Certes*, a really good cook-book, if there were one, should be one of the textbooks of that department.

Nutrition is the foundation of life, the prime necessity for recovery from sickness. Our treatment up to this has dealt with the means of removing the obstacles to recovery—clearing the road—but the vital organs can not undertake the separative processes unless they are sustained and provided adequately with material for repair. An impure or insufficient supply of material renders rebuilding impossible.

Our study of nutrition begins with the classic grouping of foods into proteids, carbohydrates, hydrocarbons, and mineral salts. The average normal person is supposed to partake of these in the normal proportions and quantities. Right here we leave the study of the average man and begin to consider him as an individual, for each departs in some respects from the average. There are men who simply can not digest meat; others are affected unpleasantly with starch-indigestion; others, again, find sugars breed their due proportion of fats.

Each form of indigestion has its well-established train of symptoms and its appropriate treatment. Thanks to the precise methods of the laboratory, we have left behind the more or less accurate guessing of our fathers, and can tell with exactitude the form and degree of the digestive insufficiency. By the use of the needed digestants we can initiate the enfeebled process, when the forces unaided could not accomplish this; and when any digestive process has begun, it continues automatically until completed.

In febrile maladies, the problem is difficult. We face an increase of waste and a weakened digestion, the enzymes being secreted in smaller quantity or not at all. Yet, if the emunctories are kept clear and in full activity, enough food will be digested to sustain life, as a rule. Common sense points to the use of foods that put the least strain upon the weak digestion. The food must be nutritious, easily digested or even predigested, and given in such quantities that the patient can take care of it without difficulty.

Here a wise remark of Fothergill's may be taken as a theme—there is a difference between putting food into the stomach, and nourishing the patient. Moreover, we are learning that man can sustain health with far less food than is usually believed, provided the little ingested is of the right kind and properly eaten. Like everybody else, when Weir Mitchell prescribed a half glass of skimmed milk every four hours as the full diet of an adult, we did not believe it was enough. But after keeping a patient upon this diet for seven months, finding his weight just what it was when the dieting began, we realized the correctness of the great clinician's observations.

In all fevers, the four-hour feeding is the rule. In typhoid fever, though, we face another difficulty. The implication of Peyer's patches places the patient in much the same situation as one whose thoracic ducts are obstructed; and, little as may be the proportion of the chyle that passes in through that channel, the patient starves for lack of it. Hence, it has been concluded that we can not nourish the typhoid patient. But this goes too far—we do not know that all of these glands are affected.

The glandular disease begins in the duodenum and by the time it has inhibited absorption through the gland-regions nearest the ileocecal valve those of the upper tract may be restored to function. Yet, the denutrition in a severe typhoid fever so closely resembles that of thyroid-duct obstruction that we should not count too much upon these glands. Hence, the absurdity of gorging the patient with food that can only do harm.

However, there is one food that in nature does not pass through a digestion-process, and that is the raw white of egg. The albumen in the egg is absorbed directly into the tissues of the fetal chick and assimilated. So, if any food can pass into the blood of a patient sick with typhoid fever, it is this substance.

In desquamation-nephritis, the milk diet possesses a value appreciated only by him who comprehends its rationale. There is nothing curative or even remedial about milk. It never cured anything. The exclusive milk diet merely allows many nephritic patients to get well. It is the exclusion of all other foods that permits the cure to take place; the milk nourishing the patient in the meantime.

In all cases of sickness, there are two considerations to be taken up: (1) How much and what food does the patient need? (2) How much and what food can he digest? The nature of the malady as well as the patient's individual peculiarities offer a variety well calculated to test the doctor's skill and patience.

The problem of the alimentation of the consumptive merits a big volume. Such a one ought to consume fat, but he can not bear it. Push fatty diet, and it loads his liver. Every day his precarious tastes demand something new. The cook-book should be searched for things novel, yet appropriate.

Still another problem is presented by the aging. Appetite remains unimpaired and the needs of the body may be the same, but the capacity of digesting and assimilating foods declines. More careful habits of eating and better selection and scientific preparation of food furnish means of sustaining nutrition. The habit of cold drinks with meals may be indulged when youth possesses a surplus; but age must avail itself of accessories: the artificial heating of the food, slow and complete mastication and insalivation, regular meals and abstaining from food between them, rest during digestion, and other aids. The new way of judging food-values by calories aids in impressing the importance of warm beverages upon the patient.

The easy digestibility of raw and of pickled meats, rice and raw oysters; the quick utilization of sea-foods, raw egg-white, and milk warm from the cow come to be appreciated. Could anybody devise a better diet for the aged than a pint of milk warm from the cow,

morning and evening, a pint of clam, turtle or oyster broth at noon, and a pint of freshly pressed fruit daily? The quantity, which would be too large for most men, is given as a maximum rather than as an average. In the case of many, the fresh milk mentioned might be replaced with advantage by clabber or buttermilk, or junket, or, better, Bulgarian sour milk.

Moderation in the use of caffeine-beverages one learns by experience, without the prompting of people who, having cheap substitutes to sell at extortionate prices, exaggerate the ills from coffee drinking beyond reason. If these drinks really do harm, we have in oatmeal-tea and other cereal decoctions excellent substitutes.

Nutrition is not limited to the question of diet alone. The personal hygiene, to be considered in the maintenance of perfect health, must be regulated: exercise that enhances without exhausting strength, rest that restores without enervating, discarding worry yet giving the mental facilities sufficient effort, control of the emotions without an apathy that removes the incentive to living.

The healthy exercise of functions without excess, and the maintenance of financial ease without the exhaustion of financial stress are matters without whose adjustment the most scientific dietary regulation would be useless. The selection of the home should be included. Many would find life prolonged and happier were they to have a summer home far enough north to escape the vigor of the heated term, and another on the Gulf, where winter's cold would be likewise tempered. Add a garden or farmlet to each, with lake and gulf for bathing, and the number of centenarians should be multiplied.

Blest is he who knows when he has had enough; who values long life with health and happiness at something more than cent-per-cent.

DRUG ACTS AND DOCTORS

Directly in line with some of our own preaching through the columns of CLINICAL MEDICINE is an editorial that appeared in the June number of *The Medical World*. Brother Taylor, in his usual direct and forceful way, goes right to the heart of this druggists' movement to secure legislation the effect of which will be to injure the physician, discredit him in the eyes of the community, take away much of his power of doing good, impair his resourcefulness during emergencies, and add to the financial burden of his patients. This movement is of such vital, far-reaching interest to the medical profession, it is so essential that our readers should be familiar with it, that we reproduce the editorial in its entirety, and we urge you to read it through, from beginning to end.

Not only is medical practice getting more and more competitive, but medical practice is getting more onerous and more and more hampered. Not only are educated and uneducated quacks and advertised frauds becoming more numerous, but the handmaiden of the physician, pharmacy, has erected itself into an autonomous body, and even now essays to be a dictator to the medical profession.

One of its first aims is to gain complete control of the dispensing of drugs. By all measurements, the doctor should be rightfully the master of the situation. The medical profession feels that no lawmaking body would be so foolish as to prevent it from *administering* remedies to alleviate disease, and in its confidence in the wisdom of legislators it makes no attempt to thwart the efforts of the pharmacal associations to annul the medical profession's ancient usage.

In Ohio, the legislature has passed a law permitting the Pharmacy Board to examine drugs kept on hand by physicians for dispensing. This was done on the plea that such has been done with the drugs in pharmacies and that physicians' medicaments should be under the same surveillance. This looks like a step in the right direction, but on careful analysis it is seen to be in the wrong direction. If an examination of drugs is to be made, it should be done at the factory, and the manufacturers should be compelled to *guarantee* their product and print on the label the date after which it should not be used, as is the case with biologic products. It multiplies work to do the examination retail all over the state. It might give plenty of pharmacists jobs, but it is wasteful and will be a financial burden on the people of the state. Ohio physicians had enough to complain about previously.

The physician himself is the man to judge of the benefit derived from the administration of remedies, and no pharmaceutical board's opinion or analysis amounts to anything *so long as therapeutic results are obtained*. The Ohio law puts the shoe on the wrong foot. The Ohio druggists fear to antagonize the manufacturers, for they must get their supplies from the same source.

The druggists' national association is endeavoring to force a bill through Congress, to thoroughly hamper physicians in their administration of remedies. Their bill aims to compel physicians to keep records of a great many drugs, preparations, combinations, tablets, etc.; pay an internal-revenue license as *dealers;* and turn over a duplicate of their list of consumers, accounting to the internal-revenue collector for the last fraction of a grain. The immense amount of clerical work entailed thereby, with absolutely no remuneration therefor to the doctor, is appalling to contemplate by a physician of fair practice, and the man with a large practice will be inundated by the deluge.

The aim of the bill apparently is to prevent the engendering of drug-habitués, but its real object is to compel physicians to write prescriptions instead of dispensing, the pharmacist thus keeping the

record. It is like the horse Lincoln told about to the Illinois legislature. A trickster sold a horse to a man, representing that the horse would set for game like a setter-dog. The two men then went horseback riding, the purchaser on the new horse. As they forded a stream the "setter"-horse sat in the river, but the other horse went on. As the setter's owner demanded an explanation, the former owner shouted back from the opposite bank, which he had reached: "I forgot to tell you that that horse sets for fish as well as for game." These bills are setting for fish that you do not see, while they pretend to set for game.

Instead of preventing physicians from dispensing these drugs, it would be better for Congress to aid in preventing druggists from dispensing them. Thousands of druggists have sold them unlawfully.

But yet no bills are ever introduced by the druggists' associations to prevent drug clerks and soda-water dispensers from counter-prescribing, which goes on wholesale in drugstores. And nothing is said of the intention of druggists to raise prices as soon as they get control of the drug trade.

The sick people themselves are not given any consideration by the sponsors of these bills. The drugs dispensed by physicians are seldom charged for, so that the patients are saved the price of several prescriptions during each sickness. Now, if they must hereafter purchase their drugs and the price of the prescriptions is doubled or trebled, many will land in the poorhouse who might have saved some money. Rather than that, of course, the druggist will very kindly *give* his advice and sell the medicine at the full price. Some glaring instances of such practice are described in *The Medical World* for February, 1912, pages 46 and 47.

Our legislators had better call a halt on these bills until they find the real purpose behind them. These entering wedges aim to separate the doctors from their patients, the final object being to increase the number of prescriptions for the durggists to compound, while the sick people pay the bills.

The antivivisection campaign was carried out in this way in England until it was ultimately successful, and now Germany and the United States lead the world in medical investigation, England lagging behind, and when the British government wanted experiments performed with snake-venom, it sent to Philadelphia for the purpose, being hampered by its own laws from making humane investigations for the saving of its own people's lives. If all mankind were so foolish there would be no hope for cure of a person bitten by a poisonous snake. The opticians, styling themselves optometrists, are pursuing a similar course throughout this country.

Verily, the legislative halls are alive with duplex bills.

Just a word about the national antinarcotic law. As we told you in our May and June issues, there is still a possibility that the national-drug-trade conference bill may be introduced substantially as prepared by the Conference, yet strong influences are undoubtedly being brought to bear to substitute a bill having the objectionable features referred to by Dr. Taylor.

If a clean bill is finally worked out and favorably reported by the Ways and Means Committee, we hope every doctor in the country will help to make it a law; but, if it is so framed as to hamper the doctor for the benefit of the druggist, entailing the disastrous consequences to you and your patients that *The World* has painted (and none too strongly), then you should oppose it—demand that it be made right before passage.

This bill is in charge of the Hon. Francis Burton Harrison, chairman of a subcommittee of the Ways and Means Committee. Write him for a copy of the revised bill and study it carefully. The medical profession has a right to be heard in this matter.

Some say that they are "too busy" who are not busy at all. They only *think* they are busy. The really busy man is one who *does things* or who sees that they are done. He knows that the right way to do things is to do them as they arise. It is the easiest and quickest way to do much business and keep everything up to date. If I want to get anything done, commend me to a busy man, always. He will do it or get it done while the other man is talking about it and explaining that he "hasn't time" to do it.—The Medical World.

THE AMERICAN COLLEGE OF SURGEONS

At last we are to have the long-heralded American College of Surgeons, the movement for the establishment of which originated at the meeting of the Clinical Congress of Surgeons of North America, in Philadelphia, last November. At that meeting a committee was appointed, this consisting of a number of eminent American surgeons—including among them Murphy, Ochsner, and Martin, of Chicago—to perfect plans for the establishment of such a college. As a result of their work, 450 prominent surgeons (500 were invited) met in the city of Washington on the 5th of May and perfected a plan. This plan, as finally given out by the founders' organization, is as follows:

1. The name of the organization is the College of Surgeons.

2. Its object is to elevate the standard of surgery, and to provide a method of granting fellowships which will indicate to the public and the profession that the surgeon possessing such a fellowship is especially qualified to practice surgery as a specialty.

3. This College shall consist of all the members of the corporation, to be known as "fellows," and its general management shall be vested in a Board of Governors; the details of management will be cared for by a smaller body, known as the "Board of Regents."

4. The Board of Governors shall consist of the 500 surgeons invited by the organiza-

tion committee to serve as the founders of the College. This Board shall be perpetuated by election from the membership of the surgical associations of North America. The Board of Regents shall consist of 12 surgeons, to be elected from the governors, these to be divided into three classes, whose term of service shall expire in one, two, and three years.

5. The fellows of the College shall be graduates in medicine who are licensed to practice medicine in their states and provinces, and who have made application for fellowship, such application to be endorsed by three fellows of the College, one of whom shall be a member of the Board of Governors. Every fellow of the college shall be designated as a fellow of the College of Surgeons, and "shall be authorized and encouraged to use the letters F. C. S. after his name on professional cards, professional directories and in scientific articles published in surgical literature."

6. An initial fee of $25.00 shall be required from each member of the College on his election to fellowship, and the annual dues will be $5.00.

These are the essential points regarding this newly established College of Surgeons. It is of interest, however, to note that it is purposed to divide the prospective fellows into four classes, namely: Surgeons falling into classes A, B, and C will be admitted without the formality of submitting to an examination. Of these, class A will consist of the founders of the College; class B shall be recruited from the special surgical societies constituting the Congress of American Physicians and Surgeons, and 100 each nominated from the principal surgical organizations of the country. Class C shall consist of surgeons of prominence of five years' standing in the practice of surgery or a surgical specialty and who, in the opinion of the Committee on Credentials, are eligible for fellowship in the College of Surgeons without formal examination.

The qualifications necessary for membership in class D have not yet been formulated, but it is presumed that candidates will be required to take an examination. For the present, membership will be confined to classes A, B, and C.

The first convocation for the formal conferring of fellowship will occur in November, 1913, at the meeting of the Clinical Congress of Surgeons of North America, at which time, it is assumed, the College will be formally announced.

The promotors are very anxious to enlist as many as possible of the surgeons of this country in this movement, the ultimate purpose of which is, of course, to raise the standard of surgical practice. Ultimately the College hopes to cooperate with our American medical schools in the conferring of a supplementary degree in surgery upon properly qualified practitioners. It is particularly anxious to popularize the use of its title, so that the laity as well as medical men may be in a position to discriminate between those who are qualified and authorized to practice surgery and those who are not.

The President of the new organization is Dr. J. M. T. Finney, of Baltimore; the General Secretary, Dr. Franklin H. Martin, of Chicago.

Any person who may desire to become a member of the College, should communicate with the Secretary of the corporation.

This movement is one of extreme interest, and we shall watch its development with sympathy, and with the hope that it may never be tempted to seek restriction of the legitimate rights and ambitions of the general practitioner.

There is not a man in all this wide world who knows enough about drugs to sentence them to oblivion, as many of the misinformed laity and some of the misanthropes in the profession would fain do.

—Vermont Medical Monthly.

THE PINEAPPLE AND DIGESTION

"Pineapple is great." So said Charles Lamb in that inimitable dissertation on roast pig, that has been the delectation of so many pigs since. Moreover, in his enconium on pineapple, he treats of it as the only sapid comestible that can bear comparison with the tender suckling from the sty. Unintentionally he ranks pineapple above his piglet, for he says that "the fruit biteth but does not satisfy"; which, being translated, means that one may get enough roast pig to satisfy, but never enough pineapple.

Fancy reaches out daringly and establishes its flag far from our fortified lines. In time, slow-moving science grows up to the outpost, and we find that what we looked upon as a brilliant flight of imagination was a premonition of the truth. Every great advance that is made in the enlargement of human knowledge is first looked upon as a daring innovation or the baseless fabric of an idler's dream. The deepest mystery about innovation is, how it ever succeeded in establishing itself in the minds of the men who lived and studied

and believed they knew the truth, as men did in the days of Jenner, Lecky, Darwin, Pasteur, Lister, Metchnikoff, Burggraeve.

How very slow the world has been in moving up to its leaders! Many times it doesn't move up. Cullen's sage advice, to use single remedies and study their action, for generations remained a mere notation in medical history. Metchnikoff's hypothesis of phagocytosis has passed into the current medical thought and expression. The definition of cancer, a "rebellion of cells," is becoming more and more probable with extended investigation.

Revenons a nos pineapple. The underlying reason for Lamb's estimate has been revealed. Like the papaw, this fruit contains a digestive enzyme of remarkable powers. While our own seven autogenous enzymes and those borrowed from "Brother Parker" each break down into usable form some single nutritious principle, those vegetable enzymes attack all. Proteid, carbohydrate, hydrocarbon; meat, starch, sugar, fat; acid, alkaline or neutral solution; papayotin from the papaw and the principle from the pineapple attack, each and all with hearty good will and speedily reduce them to assimilable chyle.

The results of such discoveries are far-reaching, extending into the realm of psychology and the domain of domestic economy. For instance, this one affords the gourmand a refuge against that weapon from which no Milan armor of proof ever protected man, the feminine tongue. Now one may hear with equanimity the admonition: "Now, papa, you've eaten enough. Remember what the doctor said, and how your indigestion will make you suffer." 'Tis to this comes the unanswerable retort: "But this is pineapple."

Impregnable the defense of him whose cause is just. The more pineapple he eats, the less peril of indigestion! So chuckle—but silently—with the hitherto unknown delight of putting one over on the missus, and eat the luscious fruit until the stomach-walls enjoy that happy distention beyond which would lie discomfort. Then, as one lolls back in the easy-chair, comfortable as to digestion and luxuriant in the sense of victory, he may somnolently indulge in dreams. Visions arise of the Flowery Land, where one may bask in sunshine while erstwhile neighbors are muffling in overcoats and rousting out ear-laps preparatory to shoveling snow.

The man who sat under his vine and fig-tree has a rival in him who reposes among his "pines" and watches their apples assume the proper dimensions, tint, flavors, and succulence. Meanwhile, we stay at home and work—for you! Heigho.

The man or woman who knows one thing well is always in demand and the better he knows that one thing the greater the demand there is for him, simply because the higher he goes on the ladder of knowledge the less company he finds, until, like a piece of ancient pottery, or a portrait by an old master, people are willing to pay fancy prices for him.—J. N. Kimball.

PREVENTIVE MEDICINE

Indiana, always alert and in the forefront, purposes to make prevention a definite duty of the medical profession, and for that purpose to organize the entire body as aids to the state health department. Legislation is proposed that puts the moral and physical welfare of the state absolutely into the hands of the doctors. Education is the means, the law its weapon, and the scientific doctors its officers.

No special expense to the state is involved, except some additional cleric force in Dr. Hurty's office. It is proposed to divide the state into as many sanitary districts as there are physicians, making the duties of each comparatively light. Annual reapportionment provides for changes. The duties of the physician are, to inspect in his district the children, homes, shops, public places, sewage, drainage, streets—in a word, to act as health officers. Children suffering and needing more care than the parents are able to afford are to be treated at the expense of the public. All diseases are to be reported, especially the contagious, and this includes the venereal. Those not reasonably cared for are to be isolated. Drug and alcohol habitués are to be registered, and excessive users to be published. Hopeless victims are to be isolated.

District physicians are to inspect the plumbing, drainage, lighting, and ventilation, and the cleanliness of abodes, public places and shops. These reports are to be acted upon by the State Board of Health. The disposal of sewage, garbage, water, food supplies, and market conditions are included. The control of drugs is also placed under the physician. The inspection of school children is extended also. They will be classified according to ability, and taught sanitation, hygiene, and anatomy, especially of the sexual organs.

The power of sterilizing unfit males is placed in the hands of the State Board of Health. Crime will be studied, and this, with prostitution, drunkenness, pauperism, in-

sanity, and other evils, be reduced as much as the development of the system proves to be possible.

The Indianapolis Medical Society has accepted this program, and more than fifty of its leading members have endorsed it.

Whether Indiana will accept so radical a measure remains to be seen. So many evils are assailed by it that the forces of darkness may be expected to rally in opposition. It will be noted that this follows the lines of the plan promulgated in these columns some time ago, to place the medical profession in the attitude of protecting the people against disease instead of waiting for its actual occurrence.

Dr. Hugh T. Patrick, the eminent neurologist of Chicago, in an address given before the Evanston branch of the Chicago Medical Society, said that he invariably dispensed narcotics, hypnotics, and all nervine medicines, and that he had just bought 10,000 tablets of potassium bromide.—The Medical World.

WHAT WILL CURE SYCOSIS OF THE BEARD

A valued friend, Dr. Musgrove, of Washington, from whom we have repeatedly received excellent suggestions, sends us this one: A bad case of sycosis menti (one form of barber's-itch), had baffled the treatment applied by the faculty. Some layman advised the victim to rub some cigar ashes into the affected area several times a day. He did so, and within four days every vestige of the disease had disappeared.

There's a lesson in this. Not that cigar ashes effected the cure—the alkali, etc., would account for this—but, why did the learned doctors fail to cure this simple local malady? Its nature and cause are well known; it is within easy reach; all that is needed is the application of a local agent strong enough to kill the parasitic growth, and penetrating enough to enter the follicles and destroy the colonies.

Probably they were "waiting for the serum." Indeed, since we have had sera prepared for acne and for pruritus, and, since chilblains are cured by the internal administration of calcium salts, why not drop local treatment altogether?

Just so. We are determined to make everything constitutional, even if we must ignore experience and reason to do it. Once upon a time the regular profession found itself unable to cope with an epidemic of malignant diphtheria raging in Paris. The only patients who recovered were those attended by a certain illiterate old woman. So marked was her success that the haughty faculty felt constrained to send a committee to investigate her method. They found she had but one resource—she applied solutions of silver nitrate to the diphtheritic surfaces.

It is not science that is at fault here—it is the lack of science rationally applied with definite object. Given a local disease caused by local infection with a known parasite. Let science ascertain which of its many agents is most deadly to this particular parasite, and in what strength the agent may be applied without injuring the tissues. A cure that left a facial blemish would be useless.

Each of us tends to the preference of our particular local remedy. I learned quite early to value the official, U. S. P. ointment of red precipitate, and rarely would apply any other until this had failed. *Apropos* of its merits I once prescribed this ointment for a patient. A year later he called on me, sleek, well-dressed, prosperous, and informed me he had quit his former work and devoted himself to the practice of medicine. He had but one single remedy, and that was—my red-precipitate ointment! He had a record of over 200 cases, and asserted he had not yet met any that he did not cure by applying "red ointment" in varying dilutions.

Judging by its certain efficacy in styes and boils, when colonies of parasites flourish in the hair-follicles, red precipitate should be effective in sycosis. But an ounce of experience is worth a pound of expectation, and we should like to hear from the field. What have you found more effective? How about Musgrave's cigar ashes? There's no nicotine and no pyridine there, all that has gone off in smoke. While tobacco itself and its smoke may be antiseptic, its ashes are different. Anyhow, tell us of how *you* treat the common skin ailments. Who will join us in this symposiums?

A physician who does not have faith in medicines does not know them, and the sooner he severs his connection with the profession the better.—Dr. O. B Hall.

THE LITTLE FOXES

Were one able to analyze the causes of any man's failure, it would be found that the deciding factors were comparatively trifling. It is the little things that count. "For want of a nail the shoe was lost; for want of a shoe the horse went lame; through the horse's lameness the message was delayed; for want of the message the battle was lost; and

because of the loss of the battle the kingdom was lost."

While I was moving into a new house a woman rushed in with a child choking on a rubber balloon drawn into the larynx. Taken unawares, I had not even a penknife with which to open the larynx, and by the time another doctor reached the scene the child was dead.

One forgetfulness—the mother's hair—rendered nugatory an elaborate disinfection after scarlatina, and the children, who had been sent away, upon returning home promptly came down with the disease.

How many an infection has there followed a not quite perfect disinfection of instruments, hands, clothing, gloves, and the like.

How many families have you lost to competitors through little neglects, little inattentions, little delays, little mistakes, little undervaluations of complaints. Recollect how Mrs. Jones expressed herself about your letting Billy suffer half an hour with his colic while you were "spooning" with "that hateful little Jenny Wren"?

Mark Smith's acne and hypochondria did not impress you as more than a nuisance, until the young new doctor investigated, found a urethral hyperesthesia you never looked for, cured it and the youth at the same time and won the latter's undying gratitude.

Lucy Brown spoke to you about her bad complexion; you paid no attention. Then old Dr. Frayley relieved her constipation, and left her blooming so roselike that she got married before spring—and Frayley attends the family.

Mrs. Gross's baby howled night and day; you prescribed paregoric, uselessly. She took him to a city pediatrist, who examined the child, found a tight anal sphincter, dilated, cured the kiddy, and pocketed a clean twenty-five dollars that would have come quite handy to yourself.

Ike Weir told you about his headaches, vertigo, and nausea; you handed him a cathartic and promptly forgot him. He felt better; but the next week he died of uremia. You lost that chance.

Lizzie James complained to you of flushes, and you gave her macrotin. But the maiden fainted at the church-bazaar, and Dr. Melinda Baker—female lady doctress—cut Miss Lizzie's corset-strings, and bluntly told her not to get new ones. You lost out.

You treated Carrie Moore for nervousness and insomnia for quite a while, till, at last, her mother took her to an illiterate old quack over at Hickory Corners. He heard the story, looked the girl over, then told the mother nothing ailed the child—that she had something on her mind. Mother needed no further aid, she diagnosed the trouble in five minutes' straight talk. You——?

There are no trifles. Cast a pebble into a pool, and every drop of water on earth feels the disturbance. Everything has its meaning. The successful physician must be a psychologist, to read between the patient's words; a Sherlock Holmes, to trace the reality back of every shadow; a veritable Admirable Crichton, in the variety and the perfection of his knowledge and the practical character of his accomplishments.

I would like to add that the Ideal Doctor ought never to die—but, in truth, the Ideal Doctor never has lived.

Beware the scandal-monger—the man or woman who is always seeking, openly or insidiously, to injure other people. Usually this person is circulating lies, taking pleasure in the distortion of simple facts so as to give them a false and sinister meaning. Trust him not.

TYPES OF MEN

France tells us that there are but four types of men—cerebral, muscular, respiratory, and digestive. Health and happiness depend upon enjoying much air, many calories, great exercise or active cerebration, according to one's type. Thoreau says: "Victory over declining health consists in keeping each type in its especial environment."

The muscular man, like Napoleon, succeeds as long as his activity has free scope, but rots in prison. The respiratory man voyages over the seas; the cerebral type gorges on visual and auditory impressions, like Edison; while the digestive species, like Gautier, puts away food in wholesale lots. Rossini's music is digestive; Mahler's cerebral.

Shut the respiratory in close rooms, and he betakes himself to alcohol; as does the digestive, who loses hunger and digestion, and the muscular, whose fibers become fatty from disuse. Marriage between like types prevents affinity entanglements and insures superior offspring. Unions between unlike types populate public institutions for the unfit and antisocial.

The reproductive type would seem to deserve a place, but probably this element forms an important part of all. Nevertheless, there are many in whom this trait predominates rather than any of the four functions designated.

Leading Articles

Giving the Patient His Money's Worth

By MAYNARD A. AUSTIN, M. D., Anderson, Indiana

EDITORIAL NOTE.—The problems of greatest interest to the medical profession these days are economic problems. One that is interesting many physicians is that of "lodge" practice, which Dr. Austin discusses thoughtfully in this paper. He also takes up the "medical firm"—the voluntary professional association of a number of doctors for more efficient service and mutual profit. It will pay you to read this carefully.

SHOULD one pick up the directory of an average city and look into that portion of the book devoted to lodges, he would see a number of names that would remind him of the piece of poetry we used to hear, that ran something like this: "Oh, we went to the county fair, all the birds and beasts were there. They came in two by two, the elephant and the kangaroo. . . ."

Besides the black, the white, and the tan branches of all the various older fraternal organizations, the last few years have seen the arrival of a new series, which take for their name, not one of the heroes of ancient or medieval history, but going into the highways and the by-ways and the wilderness, and, considering special virtues, they have seen fit to follow in the footsteps of some animal or the flight of some bird. We now have the Moose, the Elk, the Camel, the Buffalo, and the Bison, collected together in various parts of the country. The Eagle, the Owl, and the Oriole, while not all students of aviation, have many comfortable nests in various states.

With most of these later organizations, social opportunities are secondary to the special benefits that are being offered as inducements to membership. These benefits consist in a weekly payment of from three to six dollars during sickness or accident producing complete disability, and free medical service by a lodge-doctor.

A few years ago fraternal insurance probably carried more individual risks than the old-line companies. Nevertheless, fraternal insurance was an injustice because it offered something for less than it was worth, and today the last of the originally great fraternal insurance companies finds it necessary to do that which they said would never be necessary; but, yet, which they cautiously and conservatively retained permission to do with every policy-holder. One by one, they are raising their rates, until now they are but slightly below the nonparticipating and investment-eliminating rates of any of the old-line life-insurance companies.

One authority speaks of fraternal insurance as follows: "The assessment company lives from hand to mouth, and, while daily adding to its obligations, is making no adequate provision to meet them as they fall due in the future. The old-line system requires larger premiums to begin with, as it bases present losses just the same as assessment companies, but in addition accumulates a reserve for every policy-holder on its books, and thus makes sure mathematically, according to the mortality tables, of its ability to meet all losses in the future."

Enter—Free Medical Service

With the fraternal-insurance feature becoming a questionable asset, and with social opportunities less in demand, because of the prevalent cheap entertainment offered by the picture shows, some other inducement had to be offered. And this in nearly every one of the later lodges has been "free medical services."

Considering the doctor and the man who buys his medical services by the year, it is possible that in some localities such a system is a beneficent one and, without it, certain isolated communities, especially in the mining

and lumber regions, would not be able to secure proper medical service, unless a competent man was guaranteed a salary by the mine owners or the lumber men. On the other hand, the physician who engages in this class of work must expect himself to be imposed upon, for this class of people become more conservative of themselves when they can consult or call in a physician free of charge, than when they expect to pay him for every requested service.

Talking from the experience of a doctor engaged in this line of work, a physician said that he had been called out one night and found a woman suffering with a common headache—nothing unusual, nothing uncommon, and nothing necessary to demand that he should have made the trip. He said to her, "Had you had such a pain in your leg, would you have called a doctor?" and she answered, "No." But she further told him that he was paid to look after their medical needs and she thought he ought to see her if she was suffering in any way.

Poor Service from Poor Men

In thickly settled communities where there are as many doctors as there are in average portions of the United States, and who number one to about every six hundred people —or about one physician to every one hundred and twenty-five families—there is little excuse and no present economic necessity for asking for a physician's services for the little or nothing that is paid to him by many fraternal organizations; and, with but few exceptions, the members of the profession who accept such positions render service that is worth no more than they receive in return.

It is a certainty in mechanical work, and has been proven especially in factories where high-grade watches are made, that workmen on cheap movements cannot be transferred to departments where high-grade work is demanded; and our best watches are made only in those factories where nothing but high-grade movements are put together. We get good time-pieces from other factories, but no man can do two grades of work, and only too few men are capable of doing high-grade work at all times.

A physician is no exception to this rule, and the doctor whose time is occupied chiefly in contract work with people who think his services are worth little or nothing usually flatters them by showing them sooner or later that their opinion is correct.

In the practice of medicine, where scientific exactness is possible only in a few conditions as determined by the addition of laboratory investigation, the element of best service should concern the layman far more than so far it has done. It is true, as many men have told us, that people died of old-age long before physicians became a necessity, and in the majority of cases even now it is probable that the average sick person would recover without any special medical treatment.

This last statement must be qualified, however, by the fact that surgeons and physicians are annually saving untold numbers by reason of their ability to overcome such diseases as diphtheria, hydrophobia, and lockjaw by means of special serums, and because they now diagnose and have patients operated upon for such conditions as appendicitis, gallstones and gall-bladder diseases, ulcer of the stomach and the intestines, inflammation of the pancreas, and abscesses in pelves of women. These latter patients a few years ago would have been permitted to die and the cause of death masked in terms such as inflammation of the stomach, inflammation of the bowels, peritonitis, and the like.

We hear of certain members of the profession telling women patients, even now, that they have "female complaint," without the physician knowing or apparently caring to know which of the various pelvic organs are affected and what was the cause of the disturbance.

We had a time when stomach, gall-bladder, liver, pancreas, and intestinal disturbances were all treated as "indigestion," but now the doctor who uses the term "female complaint" or the word "indigestion" does so because of ignorance that is inexcusable. Perhaps patients showed signs of jaundice and then they were doctored for liver trouble, but we now know that less than ten percent of our liver-patients ever get yellow. We also know that less than ten percent of the people who complain of their stomach have any organic stomach disease, the condition being a reflex one and that the pancreas, the appendix or gall-bladder is in the majority of cases to blame; or, if not that, then the stomach is sympathetically affected because of some general nervous disturbance.

With these facts known to those who have had a thorough training, it is humiliating to the better members of the profession constantly to hear of unnecessary operations, or to have necropsies held, showing that the patients have died of neglected or unnoticed minor conditions the importance of which

was not appreciated by the doctor in the beginning.

The Doctors Who Seek Appointments

There are three classes of men who seek appointments with fraternal orders: First there is the young man just out of college, who needs money and wants experience. But I know of no young man who has taken up this work soon after graduation without falling into the slip-shod easy way of snap-diagnosis due to insufficient examinations; and his later success has always been a questionable affair.

The second class of men are those who have been failures previously and to whom the addition of a lump sum yearly means the difference between a bare living and a little extra money. Only rarely do we find a man—the third class—who, having an otherwise good practice, from selfishness or avarice accepts the position because he wants all he can possibly get, keeping the other fellows from getting anything he can prevent them from having.

The average fee assessed against the members of these organizations for medical services rendered to members and their families amount to the munificent sum of less than one cent a week per member in an average family having four in number. It is true that a professional man, when he makes a charge, charges what he thinks his services are worth; and, yet, when we turn the question around and ask the lodge member what he considers the care of his family worth, it is rare that you will find a man who will acknowledge that his wife and his children are not worthy of more than fifty cents' worth of medical service in a year.

In Pennsylvania alone, there are more than two hundred thousand persons belonging to such families.

Considering the cost of service as based on the exact standard of risk assumed by industrial insurance companies, averaging family ages to one standard at age thirty-five, one dollar a month would buy only $305 as an endowment at age seventy-five. The average lowest-paid laborer's income is near $450, so that such a risk should be worth equally as much to care for as to protect from death, namely, $1.50 a month. This sum, however, pays for only the risk of one person. The physician accepting such a medical risk does so for families averaging four or more members.

In conversation with one of the supreme officers of one of these fraternal organizations not long ago, the gentleman informed me that he thought the doctor who got the job of lodge-physician had a cinch, and he explained it in this lucid manner:

"Now, you know, doctor," he said, "that such men as I and dozens of others are going to employ the same doctor that we have always had and pay him the customary fee. The money that we are assessed in the lodge we pay over to help the other fellow pay for his medical services. There are also a lot of single fellows who join a lodge and are seldom at home and yet they keep up their lodge dues and get no medical benefits. Then, of course, if the doctor had an enemy or some fellow doesn't like him, he won't call on him for services; and there are others who won't like him as a physician even though they are not unfriendly to him otherwise. So, when it comes to the final showing, the doctor who gets the job is well paid for the actual work that he does, for only a moderate proportion of the people who pay him for his services as a lodge-physician, use him."

This man failed to mention, however, that "he and a dozen others" were making more out of the lodge than any number of their doctors; and I told him that, if the lodge-physician wasn't good enough for his family, he should not ask another man to sacrifice his family in the hands of a person whose skill was questionable. Has not the other man's family just as much right to demand the best services as his own family demanded of him?

Then, again, the average lodge member calls the lodge-doctor because he had no chance to know that there was a difference in doctors. Again, that class of men who paid their lodge dues and were away from home always call on the lodge-doctor, if there is one in town, for services when in need of any, because this class of men seldom make inquiry as to the various physicians in the community and their qualifications. Furthermore, that third class, whose unfriendliness prevented them from accepting the services of the lodge-doctor, should have the right to refuse payment for something that they would not use.

How Good Lodge Medical Service Might be Secured

Considering the present situation in America as it is being changed by the growth and development of the German aid societies and the English friendly societies, there is undoubtedly a safe plan that might secure good services to the members of these or-

ganizations, but not for the price that they are now paying.

Members of any organization should be given an option on the medical benefits, and these benefits should be limited to members earning less than two dollars a day. The members of these societies should also have the privilege of calling their own or any one physician, and payment should be made by the lodge for actual service rendered. No physician's services should be considered acceptable to a lodge unless that physician is a member of his local, county and state organization. It is true that many men belong to these medical organizations who are unworthy of membership. On the other hand, these organizations demand a certain standard of medical education and professional character, and they are the only safeguard to which the community can refer. There may be a few good men who do not belong to the medical society, but, if they are good men, they can, and should, belong.

A Consultant Should be Employed

A lodge expecting to do the best for its members in a medical way should not only permit free choice of physicians, but that lodge should have one of the best physicians employed as a consultant who would be expected to make at least one visit to every member applying for sick benefits. This consulting physician would serve the double purpose of confirming diagnosis of the member's illness and render impossible an overcharge on the part of the attending physician. All accident-insurance companies have such a consulting physician in every community. They may have someone employed to look after all their risks, but these risks are checked up by a second man.

As to the cost of such services, it is estimated that a safe limit could be placed at one dollar a month. Fifteen years' experience and personal inquiry of many other physicians show that the average family who would desire such lodge affiliation for medical benefits have paid less than ten dollars a year for medical services, and that ten dollars a year per family from all the families on the books of any physician whose practice would be made up of those who would accept such contract service would greatly exceed his actual income.

Lodge dues proper in most lodges amount to about four dollars a year. A charge of fifteen dollars per year per member would give ample security for lodge dues, pay a capable physician to act as consultant and referee, and pay the free-choice physician for his services at the rate of the average fees in most parts of the United States. Certain occasions demanding special services, where plenty of time to prepare for the event are known in advance, should not be included in this charge. A moderate fee for surgical services could be allowed under these benefits, however.

Considered from every possible standpoint, there is no economic necessity for contract practice as demanded by the various socalled fraternal orders. Considered from a social standpoint, there is hardly any excuse for the existence of the lodges themselves. They are the evolution of an enthusiastic brain, which sees in them the possibilities of a lucrative position as head officer or supreme disburser. Business men are approached first in seeking members, and the average business man who is known as a "joiner" charges his lodge dues and assessments to his advertising account.

If it is actual protection that the less-paid member of society desires, he can get it much cheaper from a regularly organized sick-benefit society or accident-insurance association than he can from a lodge. With the former, it is a matter of business to pay benefits. With the lodge, it is a matter of charity.

The wage earner who pays six dollars a year for lodge dues that pay him four dollars a week for thirteen weeks could get at least ten dollars' benefits for fifty weeks' disability at the same cost if he paid the insurance as he pays his lodge dues. The cost of the policies that he usually sees is double what his insurance risk actually is, because he demands that it be collected, and collection charges in some companies are greater than indemnity claims. If the great commercial-traveler's organizations can pay $25 a week benefits for accident, and other organizations can do the same for sickness at a cost not exceeding $8 a year, the lesser-paid members of society could obtain proportionate less sums according to their income, at a cost less than their lodge dues, if they so desired.

When Jealousies Between Doctors Disappear, Then——!

Some of these days jealousies and enviousness among physicians will, from necessity, disappear, for their independence is being more limited by the state and nation every year. In some localities, where a number of older and younger men are striving to maintain separate establishments and are dupli-

cating their expenses in every particular, five young men one day are going to get together and settle in that community. They will rent one suite of offices, they will use one phone, they will have one office attendant, and they will employ a trained nurse.

One of these men will have received proper training and proper experience to justify himself in doing major surgery. Another will have qualified himself for special work in obstetrics and the diseases of women. Still another will have had not alone the customary laboratory training, which all physicians are supposed to receive, but he will have completed the ordinary training by extra work, making him competent to handle electricity and to use it in diagnosis and treat-treatment of those diseases that respond to galvanic, faradic or ultraviolet vibrations. He will be able to use the X-ray for diagnosis and treatment of those cases where it has been found useful. The fourth one in the company will have improved himself by special work for diagnosis of internal medical cases, and his eyes, his ears, and his fingers will tell him all that a skilled diagnostician should find out. The fifth should be equally as good a diagnostician, but should be able to supplement the work of his confrères, accepting limited responsibilities during periods of frequent vacations which these men will take in turn. These vacations will not only be for rest and variation from the routine, but they will permit each man to inspect at frequent intervals the work of the "bigger man" in the bigger cities.

A competent nurse and a competent stenographer are necessary factors in the success of such a group of young men. The stenographer should be capable of grouping case-histories, making case-histories, and taking reports of examinations. A nurse is desirable because, when thoroughly trained, she makes the best anesthetist; for the average trained physician, in giving an anesthetic, too frequently is interested in the surgical problem to the extent of forgetting his duty as anesthetist. The trained nurse, without knowledge and interest in the surgical problem, feels the responsibilities of her work in giving an anesthetic, and has replaced the medical graduate in nearly every large clinic. Her services are in equally as great demand in being present during various examinations, and her work is more acceptable to many patients in doing routine dressings than the average physician's, whose time is more valuable.

Advantages of the Medical "Firm"

In such an arrangement as the above, a patient would have the benefit of all the knowledge of each member of this group of men. As to whether they should be specialists or not, that is a question that their desires in the future and the call upon their ability could determine. A specialist whose work is routine, based on a routine training for his speciality, without the broad foundation and knowledge gained in contact with general practice, is too frequently overbalanced in his opinions, favoring conditions demanding his services as a specialist, so that his opinion is not to be considered impartial. These men of whom I speak should be all-around men, with a thorough general hospital training first, with special training, second, all willing to share honors and having ability to forget jealousies.

Such a firm or such a combination of professional men not only would demand the respect of the community, but would receive financial benefit from a large radius. A patient expects a physician to examine him, and to take the necessary time to make a thorough examination. If this physician then calls in a second man who probably gives him less time but as thoroughly considers his case, and then possibly gives the patient the services of a third or a fourth physician, who makes other tests, to exclude factors in the case, then that patient will leave such a man or such an institution feeling that a consultation fee has not been paid unwisely. His examination has been such as to give him every benefit of every possible question that could bear upon his present condition and his future prospects for relief, to say nothing of excluding errors in diagnosis of possible surgical conditions.

This is not a Utopian idea—it is a situation that has had its reward in at least one city in this country, and not only from a financial standpoint, but from a professional one as well. These men have made their organization so perfect that the possibilities of doubt and mistake have been limited to the minimum, and their services are now demanded by more people than those of any other professional men in America.

An Unusual Reflex Cause of Asthma

With the Description of an Illustrative Case

By BOARDMAN REED, M. D., Los Angeles, California

SPLANCHNOPTOSIS—the term preferable to the more commonly employed enteroptosis—is the rather formidable technical name for a very prevalent trouble with which a large proportion of modern civilized women and many men are more or less affected. Splanchnoptosis means a general prolapse or sagging of the abdominal viscera—the stomach, the kidneys, and the colon most frequently, as also occasionally the liver and spleen, and sometimes even the heart. This condition is much more common in women than in men, and in the former, when extreme, frequently pushes and holds down the uterus also.

The two principal causes are overloading of the stomach in both sexes, and the use of the corset and tight waistbands in women; men have brought on the trouble, in a similar way, by leaving off suspenders and holding up their trousers with tight belts. Visceral prolapse, my experience shows, is at least four times as prevalent among women as among men.

When I discussed this subject in the August, 1912, number of this journal, I gave a fairly full account of the mechanical treatment which any physician should be able to employ with success as a rule. I mentioned also the chief symptoms, including dyspepsia and constipation, besides possible diarrhea, which latter sometimes results from an old chronic constipation.

Asthma Due to Splanchnoptosis

However, I omitted to speak of one very unusual symptom, namely: chronic asthma, a few severe cases of which I have found to result from displacements of the abdominal organs, and which would not yield to any treatment until the displacements had been corrected. It has long been known that asthma may be caused by chronic indigestion, but I do not remember to have seen in the literature any mention of the visceral ptoses as a cause, excepting the brief reference, in the last edition of my own book, to two such cases.

I have notes now of a number of cases from my own practice, and know of three others, in which the attending physicians called me in consultation. Two of these latter patients were cured by Dr. B. C. Davis, of Monrovia, California, by means of the same manipulations I have described; the third one recovered under the care of Dr. J. H. McBride, of Pasadena, and by practically the same method.

Only one of these cases of asthma caused by visceral displacements need be reported in full; but this was so extraordinary in many ways that the report necessarily will be lengthy. The details of this case in themselves make interesting reading, but, in addition, they teach a most valuable practical lesson as to the need of great care and thoroughness in deciding upon the diagnosis in every instance of obscure disease besides showing the folly of any patient's being trusted to the treatment of alleged healers who do not know how to make any diagnosis, either good or bad.

An Illustrative Case

The important case in question concerned a lady, age 34 years, who, in August of 1907, was referred to me by Dr. Jackson, a successful regular physician of Hollywood, near Los Angeles. The woman's family history was not good, her father having died of pneumonia at the age of 53, while one brother, as also two sisters, were asthmatic. Her mother was then said to be living at the age of 68, but had a weak stomach. This old lady's trouble possibly resulted the same as in her daughter, from some visceral displacement; for my experience shows that such troubles are prone to run in families. I find that when a mother has prolapsed kidneys, stomach or intestines, singly or combined, some or all of her daughters are likely to present a similar fault; unless, indeed, they have learned to live more hygienically, especially as to diet, dress and exercise.

For ten years (that is, ever since 1897) the patient had been a sufferer from asthma and had been under the care of various physicians, regular and irregular. They all had failed to relieve her, and I, too, soon had to give up the case myself, having decided, after a careful examination, that she could not be cured without the aid of a surgical operation.

It was found that both her kidneys were loose and movable and the stomach and transverse colon had become displaced far downward. The effort to replace the organs, by means of the special manipulations that generally have effected this, after considerable persistence, failed entirely. Applications of the galvanic current, which sometimes will soften and dissolve adhesions, as well as vibratory massage, also failed. The adhesions evidently were too strong to be overcome by the usual mechanical means. I urged the patient to submit to operation, warning her that other treatment must continue to be nugatory, since the usual medicinal remedies had already proved useless.

An Operation Is Recommended

I saw no more of the woman till the following summer, when one of her family informed me that she had recently returned from a trip to the middle West, where she had had two remarkable experiences, and that she now was about to be operated upon by a surgeon in Los Angeles. It transpired that while visiting a relative in Dakota she came under the care of a local physician, and he brought to see her a distinguished Chicago surgeon who chanced to be sojourning in the same town. This surgeon examined her, and is declared to have said that he found no cause for an operation. The woman was said next to have visited a city in which there is a hospital famed for the skill of its surgeons, and to one of these she told her sad story and requested that an operation be performed to relieve the displacements I had diagnosed. She was referred for an examination to one of the assistant physicians, who is said to have reported that he also, could find no cause for operating.

By this time the suffering woman naturally had reached the conclusion that my diagnosis was wrong; however, the Los Angeles surgeon first mentioned in this narrative was finally consulted. He inflated her stomach (as I had done—and as I always do in difficult or doubtful cases—by giving her to drink first a solution of sodium bicarbonate and then one of tartaric or hydrochloric acid), and in this way easily demonstrated the very decided displacements present. I was present, by invitation, at the operation.

When the abdomen was opened, the condition revealed was as I had diagnosed the year before, except that there was found, in addition, a suspicious-looking appendix and two little beginning ovarian cysts; all of which were removed. The cervix was found to be somewhat torn, and this lesion was repaired. By this time the patient showed that she was bearing the ether so badly and was so nearly exhausted that further work had to be stopped. Hence, the principal operation, for which she had been anesthetized, had to be postponed.

The asthma persisted. The patient did not come under my care again until a year and a half later, in March, 1910, when I was called to see her at a sanatorium. Her trouble was now much aggravated and her suffering every night from dyspnea was pitiable. I could only palliate her distress with the help of anodynes, and again urged the needed operation. Then I heard nothing more of her till in March, 1913, when I learned that Dr. Beckett of Los Angeles, had operated upon her successfully upon January 8 last.

In a letter to me Dr. Beckett reported thus: "An old ulcer scar in the stomach-wall just below but not in the constricted pylorus. Gall-bladder normal. Left kidney movable. Ptosis of stomach and transverse colon. Right lobe of liver elongated with thickened mass. Lower end of right kidney anchored, and adhesions between liver, stomach and duodenum freed. Patient made an uneventful recovery."

The operation, he stated, had proved a success, and the stomach, though not stitched up in place, as I had advised, had evidently gone up and remained in nearly its normal position.

When later I accidentally met the patient, she told me that she had been almost entirely relieved of her dyspnea and was regaining her flesh and strength, having only a little annoyance from the old trouble when she was much fatigued. She added the very interesting information that, among the numerous doctors of various schools whom she had consulted since I had told her that only an operation could ever cure her, there had been a number of osteopaths, naturopaths, etc., and besides, in all, ten different Christian Scientists; that she had told the latter the medical doctors had given her up, that now was their chance, and that, if they (the Eddyites) could cure her, to go ahead. They each in turn then went ahead, and kept going as long as she would pay them.

A Word About Bogus "Healers"

What ought to be said of such bogus healers, who, in utter ignorance of all knowledge of anatomy and physiology or of medical science of any kind, could thus sacreligeously, in the

name of the Lord, go on extorting money from a credulous suffering woman? As for the "Science," which they so shamefully misuse, the shades of Darwin, Huxley, and the other real scientists of the world who have gone to their reward, should nightly haunt such pretentious impostors. Even though a small minority of their duped patients are hoodooed by their incantations into fancying themselves improved, the humbug and venality of the system are so manifest that one may well be pardoned for a burst of righteous indignation at the thought of them.

The fact that even broadly educated and well-trained physicians, who have spent four to six or seven years in studying the human body and the nature and cure of disease, may sometimes make slips, is no excuse for fakers who have the effrontery to deny that any disease exists and then to charge stiff fees for attempting to cure it.

Others of the sectarians, notwithstanding the shortcomings of many of them as to their training, do more or less good, and often in diseases other than hysterical affections. The osteopathic manipulations are useful under certain circumstances, and our masseurs will soon have to add those methods to their own; for the fundamental principles of the science and art of medicine do not allow us to ignore any measures or remedies of proven value, in however limited a degree.

Many able physicians of the regular school are devoting attention to the study of the treatment of certain diseases in part through hammering or otherwise manipulating either the vertebrae or the spinal nerves at their origin. Abrams has written a strikingly original and useful work, and he goes much further in this direction than any of the Osteopaths have done. Madison Taylor, of Philadelphia, also has made valuable contributions to the study of this subject and all conscientious, thinking physicians are ready to accept useful suggestions from any source.

Occidental Versus Oriental Curdled Milk

The Advantages of the Bulgarian Bacillus as a Therapeutic Agent

By T. W. WILLIAMS, M. D., Milwaukee, Wisconsin

REFERRING to recent articles, in *The Journal of the American Medical Association*, one, by Dr. Alexander Armstrong (Mar. 29, p. 1015) and the other by Dr. E. Stuver (Apr. 13, p. 1244), the former suggesting a small glass churn for making buttermilk when needed, and the latter recommending spontaneous curdling of the milk in the open air, I wish to point out that it is not quite clear whether these writers suggest the occidental buttermilk produced by these methods as a substitute for the oriental curdled milk, for combating the proteolytic flora of the digestive tract, or simply as an excellent aliment for preventing nitrogenous putrefaction.

My object in writing is, to point out a common error of physicians, that of simply advising patients suffering from intestinal indigestion and autointoxication to drink "buttermilk"—as if it were a matter of indifference what kind of curdled milk was used.

Diminution of the saccharolytic aerobic bacilli and the simultaneous appearance of proteolytic anaerobic bacilli in the intestinal flora in autointoxication is a characteristic of the production of nitrogenous putrefaction. Metchnikoff has taught us that, on account of the small quantity of nitrogen introduced into the intestinal system by the vegetarian and lactofarinaceous regimens and the lactic acid resulting therefrom, the intestinal contents are modified in a manner to render them an unfavorable medium for the growth of proteolytic bacteria. Those microbes which produce sugar fermentation and form lactic acid being the natural enemies of proteolytic microbes, he suggested the introduction of microbes harmless in themselves but detrimental to the development of proteolytic anaerobics of putrefaction. But it is not sufficient to introduce the common lactic-acid bacillus, of ordinary curdled milk, as this organism does not survive in the human intestine.

Many pathogenic microbes, as Metchnikoff asserts, are ingested with impunity, frequently in large quantities—such as the comma bacillus of Asiatic cholera and the tetanus microbe, because they perish in the intestinal canal. This emphasizes the point that,

to combat successfully the proteolytic microbes which cause autointoxication, we must, as Combe teaches, introduce into the intestine a culture of lactic-acid microbes that are: (1) antagonistic to the proteolytic anaerobics of putrefaction; (2) inoffensive to the host; (3) capable of continued existence in the human intestine.

Intestinal infection in the large majority of cases is a mixed infection caused by a great variety of proteolytic microbes, no particular species predominating, and against which Metchnikoff advises the acclimation, in the intestine, of the harmless saccharolytic bacilli. The development of these lactic-acid microbes is favored by the lactofarinaceous diet.

Ordinary Curdled Milk Not Sufficient

The general impression that any kind of curdled milk answers the purpose equally well is, therefore, erroneous. The curdling of milk spontaneously in the open air is principally effected by the action of a lactic-acid bacterium, which does not, like the Bulgarian ferment maya, the Tartar ferment kephir, and the Egyptian ferment leben, act bacteriologically, but simply as a chemical agent, through its lactic and succinic acids, as explained by Combe.

This bacterium lactis is a small, delicate microbe that never survives in the large intestine, being unable to cope with the proteolytic bacteria inhabiting it.

The bacilli Massol of oriental curdled milk, on the contrary, are powerful, robust bacilli which battle successfully with the proteolytic bacteria of the colon, as is shown by the fact that they are in evidence in the stools. This is what gives the Bulgarian curdled milk its great superiority over occidental curdled milk in treating intestinal troubles due to a proteolytic intestinal flora. It is not merely an aliment, but a culture-bouillon and antiputrefactive, containing, like ordinary curdled milk, lactic and succinic acids, but in larger proportions.

The ordinary bacillus lactis requires about twenty-four hours to curdle milk at 37° C., while the bacillus bulgaricus requires only twelve hours. The objections of the good housewives to putting "bugs" in the milk to "turn" it would be less vehement, perhaps, if they knew that its spontaneous souring in the open air is effected in exactly the same way by almost the same kind of "bug."

Advantages of the Bulgarian Bacillus

Yoghourt, or Bulgarian curdled milk, can also be kept up, as is the custom throughout Turkey, Greece, Servia, and Bulgaria, by inoculating the day's milk by adding a little of the previous day's curdled milk to it, thus transmitting the culture from day to day, provided it is kept at the right temperature; otherwise it deteriorates and has to be made fresh from the pure culture. The bacillus bulgaricus, also called the bacillus of Massol, now generally used for making curdled milk, was selected by Professor Metchnikoff on account of its great size, it being a giant among microbes, and also for being much the best producer of lactic acid. It does not belong to the normal flora of man, but is capable of being implanted artificially in the intestine, acting as an efficient antiputrefactive.

It is probable that the tablets containing the bacillus bulgaricus, as now commercialized, are not the pure culture, as that particular microbe has the fault of attacking fats, giving the milk a tallowy taste which renders it unfit for consumption. On this account Metchnikoff combined with it the common bacillus acidi lactici, in order to counteract this action.

Curdled milk prepared from raw milk is certainly more palatable, but raw milk contains many microbes, some of which, the tuberculous, for instance, are harmful, so that it is better, upon the whole, first to boil the milk for a few minutes, which, Metchnikoff says, kills all the tubercle and butyric bacilli. Pasteurizing milk at 60° C. does not always destroy the two bacilli last mentioned.

The three lactic-acid organisms used for inoculating milk are, the micrococcus, the Bulgarian (or Massol), and the streptobacillus. All three produce inactive lactic acid ferments, but the bacillus Massol is the most powerful of all. These ferments are desiccated, pulverized, and made into tablets, and they may retain their vitality a year or more in that shape.

Gonorrhea in the Female

Its Recognition and Treatment

By E. J. ANGLE, M. D., Lincoln, Nebraska

EDITORIAL NOTE.—This completes the discussion of the treatment of gonorrhea, so entertainingly handled by Dr. Angle in the series now drawing to a close. Next month he will conclude with a discussion of the sociologic aspects of gonorrhea.

THERE probably is no disease which presents so many widely varying clinical pictures to tax the skill and judgment of the medical practitioner as gonorrheal infection in the female; and, while gonorrhea is similar in its behavior in women to that in men, the anatomical structure of the genitourinary organs of the former is so different as to introduce many new factors and problems.

In the female, the extent of the mucous membrane with its intricate folds and the diversity of glandular and epithelial tissue are enormous in comparison with the male genitourinary system. Besides, the social status of woman also complicates the problem of treatment: women seldom seek advice and continue treatment with the same freedom and determination as do men; this, perhaps, being from shame, indifference or ignorance. The vast amount of untreated and uncured gonorrhea in the female is one of the serious sociological problems of the day. "Men claim themselves to be the stronger sex. Outside of sexuality that may be true, but from a sexual standpoint, if woman were not the stronger, a virtuous woman would be hard to find inhabiting the universe today. 'No man will have the hardihood to deny that one woman of average looks, grace and manner can seduce, overcome and lead into forbidden paths fifty men, to every woman that any one of the fifty men can subordinate to his passions.'" Time does not change human nature, the rustle of the silk petticoat is just as seductive today as it was in the time of Nero or Cleopatra.

A Few Anatomical Considerations

A brief review of the character of the epithelium lining the genitourinary tract is necessary to explain the frequent localization of gonorrheal infection at certain points and its absence from others.

The gonococcus has a particular affinity for cylindrical epithelium, while pavement-epithelium offers little inducement for its habitation. Skene's glands, at the mouth of the meatus, are lined with cylindrical epithelium. The urethra, covered by pavement-epithelium, contains numerous mucous crypts, the analog of Littré's glands in the male. The Nabothian glands of the cervix and the glands of Bartholin are lined with cylindrical epithelium. The vulva, vagina, and intravaginal cervix are covered with pavement-cells. This region is made further inimical to the gonococcus by the normal vaginal secretion, which is rendered acid by the lactic-acid bacteria of Doederlein. The uterine canal from the external os to the opening of the tubes is lined with a simple layer of ciliated cylindrical epithelium. The body of the uterus contains the utricular glands, which rest directly upon the muscle, and which largely are cast off at the menstrual period. The tubes also are lined with ciliated epithelium, but have no glands; the walls are in folds, affording resting-places for the gonococci.

The external os, the internal os and the isthmus of the tube are constrictions which serve as natural barriers to the progress of infections. The vestibule is the seat of numerous mucous follicles, and just without the urethra are two rather large (paraurethral) follicles, all of which frequently are involved in gonorrhea.

Most observers agree that the seats of infection, in the order of their frequency are: urethra, cervical canal, Bartholin's glands, uterus, tubes, vulva, vagina, bladder, rectum. Vulvovaginitis is rare in the adult woman, but is the usual form of the infection in childern. In acute gonorrhea in women, I rarely find the urethra free from infection, and usually it is associated with cervicitis. Contrariwise, Dannreuther's statistics, based on a large private and dispensary practice, show that in 65 percent of cases the cervix uteri is the seat of primary infection. However, the consensus of opinion is decidedly against this statement.

Apropos of the varying virulency of gonorrheal infection. Doederlein makes the following statement:

"Clinical experience and bacteriological investigations have given rise to the following important conclusions respecting the etiology and pathology of gonorrhea:

"A wide, patulous external urethral orifice in the male favors the entrance of the female secretion; so that one with such a urethral orifice may acquire gonorrhea, while another —later-comer—may not acquire it.

"Likewise in the female, the anatomical conformation of the genitalia has an influence on the kind of gonorrheal infection: with a narrow vaginal outlet, virginal, the urethra is likely to become infected; and in a non-virginal vagina the infecting agent more easily comes in contact with the upper part of the vagina and cervix. Infection with acute gonorrheal pus causes in women a much more acute, stormy attack of ascending gonorrhea (Wertheim) than an infection with chronic, latent gonorrhea.

"In labor, the gonococci in the lochia become more virulent, which favors an ascending infection.

"In marriage, the two participants may become immune to each-other's gonococci, so that it is not possible to have a further exacerbation of gonorrhea between these two. When a third person trespasses, however, it is possible that he may have an attack of acute gonorrhea, while neither the man nor woman have any manifest gonorrhea. (Wertheim.) Not every connection with a gonorrheic woman is followed by an infection, because in chronic gonorrhea the genital secretions can at times be free of gonococci. Marked irritation of the genitals, as from menstrual or puerperal secretions, bring the gonococcus to the surface, and so raise the infectiousness of the woman. Under these conditions, the symptomless gonorrhea of man can experience a recrudescence, and the man can, through his wife, be infected with a virulent gonorrhea.

"In man, latent, i. e. symptomless yet infectious, gonorrhea can—through excesses, especially those venereal (marriage)—experience exacerbations and appear after a pause of perhaps ten or twenty years."

Hussey notes, in regard to the gonococcus in the puerperium, that "this infective agent may lie dormant for an indefinite period of time in the cervix, and that it may under favorable circumstances acquire new virulence and light up fresh inflammations. Clinically, gonococcus infections differ from the septic ones in the mildness of the systemic symptoms, the tendency to appear during labor or in the second or third week of the puerperium, and in the chronic course which they run. Pus-tube formation is more frequent and pelvic cellulitis less so, and the patient rarely presents the appearance of profound illness characteristic of other forms of sepsis. Moreover, the prognosis is usually good."

Diagnosis

The diagnosis of gonorrhea in a female is made by the history, by the clinical course, by the appearance of the genital organs, and, lastly, by the microscopic examination of the discharge. In all acute cases, the burden of proof rests on the microscope and the specimens of the discharge obtained from the patient's urethra, vagina, and cervical canal. Such specimen-discharge is best obtained from the urethral and cervical canals by means of a little sterile cotton wrapped on a fine applicator. In typical cases, a single stain will suffice, while in doubtful ones or mixed infections the Gram method should always be resorted to.

It is important that the patient about to be examined for gonorrhea should not cleanse the vulva or vagina with douches and should not have passed her urine for several hours, else it may be difficult to obtain the secretion for examination.

In medicolegal cases, cultural tests should invariably be made. The gonococcus grows on blood-serum or hydrocele agar at body-temperature.

The diagnosis of latent and chronic gonorrhea is beset with difficulties and only in a minor percentage of cases can the gonococcus be found. This explains why so many women with latent gonorrhea infect their friends, and, yet, have a clean "bill of lading" from their family physician.

The diagnostic points of chronic gonorrhea are: (1) disease of Bartholin's glands; (2) a reddened urethral meatus, especially the orifice of Skene's glands; (3) erosion of the cervix. Secretions from the several locations named should be obtained, and such examinations he made repeatedly.

Instillations of silver-nitrate solution (2- to 5-percent) into the urethra and cervical canal should be used as a provocative test, the same as in the male. When the secretion is but slight, the urethra should be massaged through the vagina until a small drop of pus appears at the meatus.

The glands of Bartholin should be palpated, and the presence of a purplish-red areola around the orifice noted (the maculæ gonorrhoicæ of Sänger). An examination at the menstrual period is more conclusive than at

other periods, because at that time the congestion of the uterine organs increases the discharge and in all probability more gonococci are being thrown off.

Bandler asks the question, "Are we in a position clinically to diagnose chronic gonorrhea when a few pus-cells and no gonococci are found?" He believes that certain cervical alterations are of importance, especially when chronic urethritis is not present, when maculæ gonorrhoicæ or other external evidences are entirely absent, and when tubal and peritoneal changes are not marked. He has accepted as an axiom that "cervical erosions plus a pathologic cervicouterine discharge in nulliparæ is presumptive evidence of cervicouterine gonorrhea." I would supplement this by adding, When no malposition is present.

We have made important progress in diagnosis in recent years and can now call to our assistance the complement-fixation test. Schwartz and McNeil, of New York City, have done most thorough and exhaustive work with this test. They have found that a negative reaction will probably be obtained if the disease is limited to the urethra, Skene's glands and Bartholin's glands. The cervix or the uterine adnexa must be involved, though, to make the findings of this test reliable. The following statistics published by Schwartz and McNeil will give an idea of the field of usefulness of the complement-fixation test in gynecology:

Statistics Anent the Complement-Fixation Test

Clinical Diagnosis	Positive	Negative
Urethritis and endocervicitis:		
(a) Gonococci present	9	0
(b) Gonococci not found	8	3
Gonorrhea clinically cured	1	4
Chronic gonorrhea, gonococci not found	2	0
Gonorrheal vulvovaginitis; girls under 5 years, gonococci present	0	10
Salpingo-oophoritis	9	3
Pyelitis clinically considered gonorrheal	2	0
Vulvovaginal abscess; gonorrheal	2	0
Pelvic peritonitis	3	1
Pregnancy, gonococci present	1	0
Pregnancy, gonococci not found	14	40
Miscellaneous cases from the clinic; lacerations, displacements, etc.	13	50
Pyosalpinx	3	4
Pelvic abscess	0	2

The Treatment

It will simplify the presentation of this subject to consider treatment under two headings, namely: (1) gonorrhea confined to the parts below the os uteri internum, (2) gonorrhea involving the body of the uterus and its adnexa.

It is important to remember that acute infection is limited to the lower part of the urogenital tract in the great majority of cases, and that, if the patient can be brought under proper care and treatment at once, involvement of the upper genital organs will not occur. Our treatment then should aim at the prevention of ascending infection and the elimination of the gonococci. Menstruation appearing within the first two weeks delays recovery, and the earlier it occurs after infection, the longer the period required to effect a cure.

The value of gonococcic bacterin in the female is in direct ratio to the degree of the extension of the disease and the depth of penetration of the cocci. There is some question about the value of the bacterin in vulvovaginitis and urethritis, although Hamilton, of the Vanderbilt Clinic, found it of great service in gonorrhea of children.

My custom is, to give the bacterin in every case of cervical involvement. The object is a two-fold one, to serve as a curative for the territory involved, and as a prophylactic against extension upward to the tubes and ovaries.

The dosage in the acute stage is 25 million; in subacute, 50 to 100 million; in chronic cases, upward to 1000 million. The injection is repeated every two to seven days, depending upon the magnitude of the dose and the particular stage of the disease.

I am strongly convinced that the systematic use of bacterin in the early stage of gonorrhea will materially decrease the percentage of serious complications.

In the acute stage, rest, restricted diet and cleanliness should be observed. The bowels should be kept free with one of the saline laxatives. It is at this period that frequent copious irrigations with hot water are especially indicated. The water is used at a temperature of 115° to 120° F., 4 quarts, at least, being used at each treatment, this to be repeated every three or four hours. The water may be plain or, as I prefer, it may be the normal saline or a 2-percent boric-acid solution. Fluids of this character remove the pus and cocci without injuring the epithelial covering, and thus, consequently, limit the infection to superficial areas.

In addition, twice daily after the cleansing douche, with the legs widely separated, the surface of the labia majora and minora, of the vestibule orifice of the urethra and the exposed portion of the vagina should be

painted with either a 10-percent protargol or a 50-percent argyrol-glycerin solution.

With the passing of the acute period, more active treatment is indicated. The patient should use, morning and evening, a 2-quart irrigation with one of the following fluids:

(1) Potassium permanganate, 1 : 4000,
(2) Condy's[1] fluid, 2 drams to the quart,
(3) Tincture of iodine, 1-2 to 1 dram to the quart,
(4) Picric acid, 1 dram to the quart.

My own preference is for either the picric-acid or Condy's fluid.

The patient must be reminded that the douche should be taken in the recumbent position, with the pelvis slightly elevated on a douche-pan. The douche-bottle should be at an elevation of 3 or 4 feet, and the water be as hot as can be borne. If the mucous membrane around the introitus is compressed at intervals the vagina will become ballooned and thus the remedy be brought into contact with all the area of the folds. I find it well to precede the medicated douche with one of plain hot water.

If the cervical canal is the seat of infection, topical applications should be made by the physician at intervals of two or three days. After removing all discharge from the vagina and cervix (the cervical canal is not entered), the exposed portions are painted with a 10-percent solution of protargol, after which a cotton-wool tampon is placed against the cervix; this tampon being medicated with a solution of 10 percent of ichthyol in a 25-percent boroglyceride solution. This is to be removed after eight or twelve hours. Dr. Gies is a warm advocate of the picric-acid treatment and medicates the tampon with a 2-percent solution of picric acid dissolved in equal parts of water and glycerin;[2] a second, moistened, tampon is inserted so as slightly to distend the vagina. These are left in place for thirty hours. It is claimed that the glycerin draws the gonococci to the surface and then the acid solution destroys them. The cervical mucus is always stained yellow, showing that the solution has passed into the cervical canal from the tampon. In the acute stage, patients are said to be cured in two to four weeks, if seen sufficiently early. The picric-acid irrigation should accompany this treatment.

Only in latent or chronic cervical infection, direct local medication is permissible. The cervical mucus is best removed with a small blunt curette. We can use either the uterine syringe to instill the medicine, or apply it with a cotton-wrapped probe. A selection may be made from the following solutions: Silver nitrate, 5 to 25 percent; tincture of iodine; iodized phenol; 2-percent picric-acid solution; 10 to 20 percent solution of zinc chloride. The stronger the preparation, the more sparingly it must be applied.

The tip of the syringe, to the extent of an inch, is wrapped with cotton and introduced up to the inner os and then the solution is injected drop by drop as the instrument is withdrawn. If preferred, the cotton may be left behind, for more pronounced medication.

It should not be overlooked that the patient's resisting power in these chronic cases is lowered to a marked degree. An anemic genital canal can not resist infection and deep penetration of the cocci. Iron, strychnine, and the increased consumption of food, along with all that makes for good hygiene, are indicated.

Acute urethritis is treated in the same general manner as in the male. Capsules of boric acid or of salol, 5 grains, with methylene-blue, 1 grain, should be given after meals for ten days, to be followed by oil of santal in 10-minim doses. If the urine is excessively acid, potassium bicarbonate in suitable doses is indicated. If tenesmus or urgent urination is complained of, atropine should be given in doses of 1-200 to 1-150 of a grain.

The urethra should receive treatment on alternate days, the physician using an injection of protargol or hegonon of 1-2- to 2-percent strength. I find it convenient to use for this purpose an olive-tipped syringe holding 1 ounce. After the urethra has been distended and emptied several times, the remainder of the solution is forced back into the bladder, to be voided later.

At home, the patient uses the same solutions, but in one-half to one-fourth the strength just named. A 1-dram syringe is prescribed for this purpose. The woman is told to use the injection after the following manner: To sit with the hips well forward on the edge of a chair, in a semireclining position, with the thighs separated and the clothing drawn out of the way. A mirror of medium size is placed on the floor, at such a distance and angle as to bring the external genitalia into view. With this assistance, and a little

[1] Condy's fluid, according to the National Dispensatory, is made by mixing 53 parts of potassium permanganate, 333 parts of crystallized aluminum sulphate, and 777 parts of hot water. On cooling, potash alum crystallized out, which is separated from the liquid. The latter, hence, consists of a solution of potassium sulphate and permanganate of aluminum. The U. S. Dispensatory states that "all the available oxygen of the permanganate acid is utilized, whereas only 60 percent of this amount is utilized with the simple alkaline permanganate."

[2] The acid should be first dissolved in the water, then the glycerin added, as when rubbed in glycerin it explodes.

practice, the average patient will have no difficulty in satisfactorily injecting her urethra. The tip of the syringe should remain in close touch with the meatus for a minute and then released, repeating several times, to insure thorough medication.

Subacute and Chronic Cases

If the urethritis is of the subacute or chronic type, instillation of silver nitrate, 1-4 to 2 percent, or ichthargan, 1 to 5 percent,

Fig. 1. Uterine applicator syringe

should be given at the office every two or three days. For this purpose the uterine syringe, as shown in Figure 1, is suitable. The tip is passed down to the bladder orifice, and the instillation made as it is being slowly withdrawn.

In resistant cases, I usually have found dilatation with sounds or the straight Kollman dilator, followed by an injection of 2 to 5 percent protargol, beneficial. Occasionally strong applications of silver nitrate, applied with the aid of an endoscope under illumination, to the urethra, or of trigone of the bladder, will be necessary to heal erosions and ulcers or to destroy a granular patch.

At times, the infection lingers in Skene's glands. These bodies are found on either

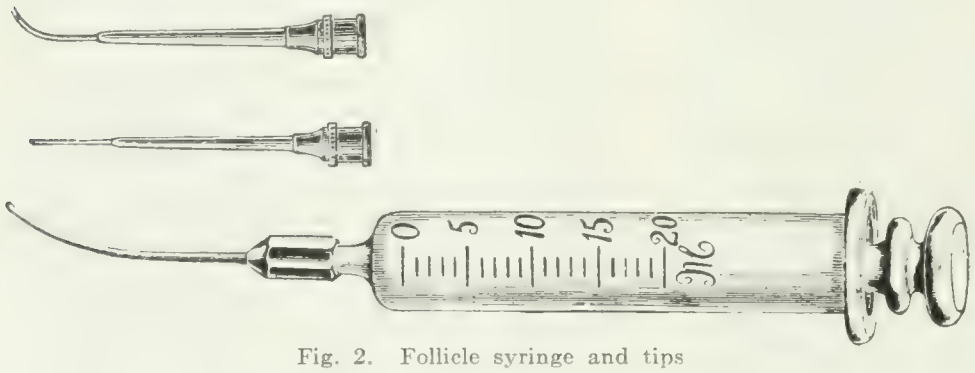

Fig. 2. Follicle syringe and tips

side and just within the urethral orifice, and pressure will produce a small drop of pus. In treating these glands, I use a glass syringe fitted with blunt, gold-pointed needles of various shapes (Figure 2).

If strong solutions of protargol and of argyrol fail, a few drops of a 2- to 12-percent solution of silver nitrate is slowly injected into each duct, or the duct may be slit into the urethra and touched with carbolic acid on a fine, cotton-wrapped applicator. At times, I have found electrolysis with a medium-sized blunt needle, or, also, cauterization with a fine galvanocautery point efficient in dealing with indolent glands and follicles.

The follicles of the vestibule and the ducts of Bartholin's glands are treated precisely as the other glands named. Infection rarely extends to the gland proper. An abscess of a Bartholin's gland demands a free longitudinal incision, curettement, and the application of carbolic acid followed by alcohol, and dressed with iodized-gauze packing.

When gonorrhea has invaded the parts above the cervix, there is usually an exacerbation of all the symptoms. The menses become too frequent, too profuse, and are accompanied by pain during and before the flow.

Acute Endometritis, and Adnexal Disease

The treatment of acute endometritis of the body of the uterus does not differ from that as described for the lower urogenital tract, except that rest in bed is more imperative. In the chronic form, a conservative treatment should be carried out for some time this consisting of hot douches, dehydrating tampons of glycerin with ichthyol or iodine, and applications to the cervical canal, if it is involved, as usually is the case.

In the advent of failure, my preference is for a thorough curettement of the uterine cavity, with the patient under anesthesia, observing the usual surgical precautions. This should be done with a semi-sharp curette; which will express the glandular contents, but will not destroy the endometrium indiscriminately. After this, the uterine cavity is flushed, painted with tincture of iodine, and packed with iodoform gauze.

Gonorrheal infection of the body of the uterus (myometritis), perimetritis, salpingitis, ovaritis, and localized peritonitis are always serious complications. There is usually an initial chill, increased pulse rate and temperature, and localized pain and tenderness.

The acute stage of adnexal disease should be treated by rest in bed, the application of

an ice-bag over the abdomen, frequent hot douches of a physiological salt solution, catharsis with saline laxatives, and a liquid diet. Operation is not indicated, unless there is a formation of a pelvic or tubal abscess or the appearance of general peritonitis. In the former instances, the abscess is usually opened and drained through the cul-de-sac; in the latter case, an abdominal operation generally is indicated.

As the acute attack subsides, the use of vaginal douches and medicated tampons frequently is helpful. With careful treatment and avoidance of undue exertion, adnexal disease may be cured, or the symptoms be so slight as to cause little inconvenience. In such cases there may be no need of operation. In other cases, however, there is constant pain and discomfort, and occasional acute outbreaks from the diseased tubes and ovaries. Here, operation is indicated when the acute symptoms entirely subside.

Although the vaginal route for these operations is employed by some surgeons, the majority at present prefer the abdominal operation. The usual rule is, to make the operation as conservative as possible, i. e., to remove such portions of the tubes and ovaries as are actually diseased, but to leave as much of the organs as possible. Especially with younger women, it is desirable to leave some ovarian tissue. The radical operation, with removal of all the adnexa and the uterus, is indicated only when these structures show marked evidence of disease.

It is needless to say that these questions should be decided by a competent gynecologist and abdominal surgeon.

Conclusions

The earlier treatment is instituted, the more prompt and certain the result and the less danger there will be of ascending infection.

The overzealous treatment of gonorrhea in the acute stage should be discouraged and we should err, if either way, on the side of masterful inactivity.

The infection lingers longest in the tubes, cervix, Skene's and Bartholin's glands, and repeated examinations should be made before a patient is pronounced cured.

In the pelvic complications, time, douches, and tampons will bring about resolution in the majority of cases.

Surgical and Medical Experiences in Asiatic Turkey

Cases From a Missionary Doctor's Note-Book

By D. M. B. THOM, M. D., Mardin, Turkey in Asia

Urethral Stricture in a Male

SOMETIME in last November I received an urgent call to attend a sick Moslem. I found a man of about 35 years, married, but without children. He was above the average in physical build, in flesh and form, but had spent his short life in riotous living and all kinds of dissipation. The man was suffering intensely, as evidenced by the expression of his face, the perspiration standing out as beads on his forehead.

I learned that he had been unable to pass any urine in the last twenty-four hours, except only in driblets. This was not the first time he had been in this condition, for once before I had relieved him of this same difficulty, by dilating the urethra; and I had warned him to keep aloof from everything that might cause irritation. But he had again fallen. Now for twelve hours he had been trying to pass some kind of instrument himself but had only succeeded in tearing the walls of the urethra and producing pockets in its side. Hence, upon attempting to pass a catheter, I failed to get it through.

I persuaded his people to bring him to the hospital and there I worked over him for two hours or more, but still without successfully opening the urethra, although he was able to pass a small stream, but not to the extent of emptying his bladder. Extravasation of urine had already occurred around the pubic region and into the scrotum, an opening having been made on the right side of the penis, at its union with the pubic region under the skin.

The patient was put to bed and when I again saw him the next morning I found that

the extravasation had greatly increased. I recommended external perineal urethrotomy, but as he did not comprehend the gravity of his condition he thought it was not necessary, there being a larger flow of urine than there had been. However, I could already detect the signs of inflammation, with a sure prospect of gangrene. I begged of him to allow me to have my way, but he declined.

It was only a matter of two or three days before gangrene and sloughing set in and eventually this took away more than two-thirds of the entire scrotum, leaving both the testicles exposed.

The question now was what would the next step be—perform castration, or, in time, resort to plastic surgery, to make good what had been lost. But neither expedient proved necessary, for, after he remained in the hospital for three weeks or so, the man went home practically well. He received the most careful attention in every way from first to last, and, with nature's assistance there simply was formed a new scrotum. And, so today, he is rejoicing in as useful an organ as ever the original one was.

After his returning home, my surgical dresser saw this patient twice a day for a month or more, leaving him only when the healing was complete. This patient was from one of our wealthiest houses, and had I bargained with him at the time I could have got 50 pounds out of him; but now that he is well, we may have to sue him for our bill with a question whether we get anything.

The interesting lesson of all this is the part nature plays, in repairing the loss sustained, without any further surgical aid. Conservative surgery sometimes is a grand thing, as is proved in this case.

Tetanus

We had three cases of tetanus in one year, two fatal and one recovery, the history of which may be of some interest.

Case 1.—Male Christian. The day before the last Turkish "Fourth of July" a young man was brought to the hospital "on" theWarden Hospital "van"—that is to say, a donkey—tied up and wrapped up to keep him from falling to pieces. He was a sight to behold.

It was learned that as the man was passing a friend's shop while on his way home from the market, he stopped in and found the owner busy rubbing up something in a mortar. To be social, he asked his friend to let him take a turn at the pestle. But no sooner had he begun rubbing, than a tremendous explosion took place—the operator's hand that held the pestle was blown to shreds, the other hand badly torn, his face blackened, both eyes destroyed, hair singed, his whole chest scorched. And all this for trying to accommodate a friend in the preparation of material for fire-crackers!

There was no possible help for the hand—other than to amputate; which I did at once. Then I sewed up the other hand, washed out his eyes, cleaned up his face as best I could, and then, after the other injuries needing attention were attended to, I put the man to bed.

The patient was a young man about 22 or 23 years of age, of large, fine physical frame, and a jolly good-natured fellow; and it transpired that he was engaged to be married. Even in this terrible calamity that had come to him, he was jesting with his prospective mother-in-law and speaking nonchalantly about his future as a blind, helpless creature for the rest of his life.

For ten days he got along beautifully, his wounds healing as nicely as one could wish. But the eleventh day symptoms of muscular tension about the jaws developed, gradually extending over the whole body, and after six days of great suffering he passed away.

Case 2.—Female, Christian, age 17, married; one child. For a year or two she had suffered from glandular enlargement in the left axilla to an abnormal extent. I had operated on the glands half a dozen times; but they would reappear like mushrooms; and again would have to be scraped out. It was five or six days after one of these operations that she began to show signs of the dreaded tetanus. She was an out-patient, but I had her brought to the hospital, and everything was done for her that could be done; for all that, she, too, died after eight or ten days. Now, what was there in her case that produced the disease? Where did she contract the bacillus?

Case 3.—Male, Moslem, carpenter by trade, age about 40, strong, well-built. He was an out-patient and would not come to the hospital. I saw him but twice. (Maybe that was what saved him!)

In his case there was no wound, not one visible cause for this attack of lockjaw—and, yet, the muscular contractions started. But strange to relate, even though the spasms were marked in jaw, neck, and back, and he swallowed only with the greatest difficulty, *this* man recovered. Why?

A Unique Case of Ascites

My first record of this patient is August 24, 1911, when I was called to see him. I found

a young man, aged 28, who had been taken ill in June and had gone to Orfa for treatment and while there had been tapped twice. After his return to Mardin he had been in a bad way. His abdomen was greatly distended, he was badly emaciated, his urine scanty, bowels constipated, appetite small, sleep none, and he felt great distress. To relieve this I proceeded to tap him and drew off fully four gallons of ascitic fluid. I was again called after five or six days, and again I tapped him, the same amount of fluid coming away. And so it was kept up through the fall and winter, he being tapped on an average of twice a week.

In the spring the man again went to Orfa. There, laparotomy was performed. After he returned to Mardin, his father armed himself with a trocar and became his tapper, the operation now being performed every two or three days. Getting tired of the continuous boring of his abdomen, and hearing that in Beirut they opened up a person, taking out all his organs, laying them on one side, selecting the diseased one, removing that, putting back the rest, sewing the patient up, making him new again, he started for that city, taking in all the doctors along the way. Reaching Beirut, they went in search of the noted surgeon who, they had been told, did all that wonderful work, but failed to find him. So the party went on to Jerusalem hoping that a visit to the tomb of Our Lord might heal the man's sickness.

He is again home, keeping up the puncturing every other day or so. It is safe to say that by this time he has been tapped fully 175 times and fluid drawn off to the amount of 2887 pounds, and, yet, today this man is in better flesh, has more strength, eats better, sleeps better, and in every way feels better than he did one year ago. He goes and comes as any healthy person does.

Now, what is to be done for this man, more than has been done? There is but little in the materia medica that has not been given him by myself and others. How, now, would it do to fix a silver cannula in the wall of his abdomen so arranged as to permit drawing off fluid whenever needed without having to bore through the wall every time? What say you?

[Since Dr. Thom does not tell us the *cause* of the ascites it is pretty hard to make any suggestions for treatment. If the case is renal or cardiac in origin it is safe to say that the doctor has done everything that can be done; if it is hepatic, there is a possibility that the establishment of collateral circulation by attaching the parietal to the hepatic peritoneum might give some relief. It is not an easy operation.

Considering the young man's age and the history, is there not a possibility that he is suffering from tuberculous peritonitis? Should that be the case the simple operation of opening the abdomen in the median line, with or without subsequent drainage, is very effective, especially in the serous cases. Rörsch collected reports of 358 cases showing 70 percent of immediate cures and 14.8 percent of cures lasting more than two years. Others have secured even better results. We refer Dr. Thom's suggestion of the retained cannula to our surgical readers. What do they say?

The story of the cases of tetanus again emphasizes the importance of using tetanus antitoxin in every patient suffering from a contused, incised or ragged wound, *as a prophylactic measure.* There is little doubt that when this is employed *the disease can be prevented in practically every instance.* It may seem expensive—but it pays in lives thereby saved. After tetanus has developed the antitoxin is of far less value.

This is fine work! What splendid opportunities for doing good open up to our missionary physicians, and how nobly they are meeting them. We shall all of us profit by Dr. Thom's report. Doctor, give us more. Ed.]

Impacted Renal Calculi

How to Obviate the Necessity for Operation

By F. HOEFFER McMECHAN, A. M., M. D. Cincinnati, Ohio

EDITORIAL NOTE.—In this article Dr. McMechan tells the story of an interesting case, and shows how through the use of hyoscine, morphine and cactoid, combined with regional analgesia, he was able to make surgical intervention unnecessary.

SOME years ago THE AMERICAN JOURNAL OF CLINICAL MEDICINE printed my brief summary of a case-report regarding the comparative value of the combination of hyoscine, morphine and cactoid as a pain reliever in renal colic. The patient, a man 45 years of age, had been passing calculi at frequent intervals ever since his nineteenth year. This case-report was extensively reprinted in a number of medical journals throughout the country, and this fact is offered in extenuation for reviving the subject, besides adding certain additional details of treatment which serve as an illuminating experience in the management of impacted renal calculi.

Previous to treating the patient in question myself, I had heard, through mutual friends, of his troubles with renal calculi, but was inclined to discount them as rather exaggerated. However, when my first effort to relieve one of his attacks of renal colic required the hypodermic administration, in divided dosage, of 1 grain of morphine and of 1-50 of a grain of atropine before any effect was secured, I was more prone to accept the man's own story of his trouble; the details of which I have since had verified by a number of physicians who had attended him.

Previous to the use of hyoscine, morphine and cactoid during the attacks of colic and periods of impaction the patient not only required heroic doses of morphine, but he suffered all the disagreeable after-effects of the drug's narcotism. The hyoscine, morphine and cactoid employed by me proved such a wonderful and gratifying substitute that the patient, when he could not secure my services, would demand the use of this combination from other physicians called, and was rather bitter in his criticism of their lack of progressiveness if they did not have the preparation or were averse to using it. In this way he was directly responsible for several practitioners adding the hyoscine, morphine and cactoid tablets to their hypodermic armamentarium.

The patient can recall a number of instances in which the impaction of the calculi in the ureter extended beyond periods of six days; shorter periods of impaction being considered negligible.

The First Case of Impacted Stone

In the first instance of serious impaction, after nine days had elapsed, the patient was prepared for operation by Dr. Lyle, but, after consultation with Dr. Oliver, he was removed to Christ Hospital, where the stone passed into the bladder shortly after his arrival. At that time the question of removing his left kidney in which the calculi originated was being considered. However, upon the suggestion of Dr. Oliver, a very strict dietetic regimen was instituted, and in about ten months the formation of calculi was diminished considerably.

On a subsequent occasion a calculus became inpacted for six days, and then, after it had finally passed into the bladder, it became impacted in the urethra, and it required some skill on the part of Dr. Orr to remove it. Later Dr. Walton performed a similar service for the patient. The stones thus removed were of a phosphatic nature, irregular in shape, and of very considerable size.

I have had the patient under my personal observation for about ten years now, and during that time have given him innumerable hypodermics, with increasing disgust with their inefficacy as well as with the bad after-effects; when, at last, the hyoscine, morphine and cactoid combination offered an at least partial solution of the medical problem involved, its principal advantages being that it served to decrease the necessary dosage of the morphine, reduced the narcotic after-effects to a minimum, while seemingly exercising a more potent effect in relaxing the spasm of the ureter.

However, some years ago, shortly after the original case-report, during a prolonged siege of forming and voiding calculi (due to the patient's abrogation of his dietetic regimen), a stone became impacted in the

right ureter and remained there for a period of thirteen days. Previously most of the calculi had passed from the left kidney and the ureter on that side had become sufficiently dilated to allow the passage of stones much more readily than the right one.

Operation is Refused

Despite all my requests for consultation and operative interference, the patient decided to take his chances on the stone coming through. During its period of impaction the patient had been receiving two hypodermics of the full-strength hyoscine, morphine and cactoid tablets, within the space of twenty-four hours. On the evening of the thirteenth day my own patience and the confidence of the patient's wife were exhausted. But the patient remained obdurate in his intention to avoid any operation, arguing that no sooner had a surgeon removed the offending concretions and stitched up the ureter, than another would come through, and so his life would be doubly imperiled. His argument was incontrovertible, of course.

In the emergency, the presence of a tube of novocaine and adrenaline tablets in my hypodermic case provoked an association of ideas. I had been reading with interest the results of Quénu, of Paris, in reducing fractures and dislocations under the influence of local analgesia, and it also occurred to me that Dr. C. A. L. Reed had recently read a paper, before the Academy of Medicine, on "The Painful Uterus," in which he had described how during any pathological process each of the painful abdominal viscera had a corresponding pain-spot along the spinal column.

Upon questioning the patient regarding any painful area along his spinal column, he immediately and without hesitation indicated with his thumb a spot about an inch from the median line, to the right of and at the level of the second lumbar vertebra; and, by applying digital pressure, this was found to be a definite, circumscribed and fixed point of excessive tenderness.

Taking one novocaine and adrenaline tablet and one full-strength tablet of the hyoscine, morphine and cactoid combination, I made a solution in water, and, using a 2-inch needle, injected perineurally into the depths of this pain-spot. The hyoscine, morphine and cactoid now exerted a much more rapid effect than at any time previously noted, and some hours later the impacted caclulus passed into the bladder; being voided with the morning urine. The patient established its passage into the bladder by the sudden relaxation of tension in the right seminal cord and testicle—a sign which he had come to rely upon through experience.

This tension of the cord and testicle is a diagnostic point of considerable significance in differentiating renal-stone impaction or colic from other abdominal pains radiating from the lumbar region. This patient, furthermore, was able to locate the point of impaction in one of the three kinks of the ureter by the point to which the radiating lumbar pains came anteriorly on the abdomen, and by the increased tension of the seminal cord and testicle as the calculi descended nearer to the bladder.

The success of this first regional analgesic injection prompted its further use. All subsequent injections of the hyoscine, morphine and cactoid compound were combined with novocaine and adrenaline, and were given perineurally; and the point of injection, as indicated each time by the patient's thumb, did not vary outside the circumference of a silver quarter. On one occasion, at my office, such a deep injection for an attack of renal colic secured the passage of the stone into the bladder within ten minutes. The event was dramatically announced by the patient's grunt of pain as the calculus passed through the orifice of the ureter, and by his springing from his chair ,with a smile and a shout, "It's through!" and the immediate voidance of four ounces of crystal-clear urine, the secretion of which had probably been due to the administration of the adrenaline.

Advantages of the Compound

It was found on various occasions that the combination of the analgesic tablet with the hyoscine, morphine and cactoid permitted, not only the use of the half-strength tablets, but frequently of as little as one fourth of the combination, for getting prompt effect. Also both the narcotic and analgesic effects were speedier, and the passage of the calculi occurred far more promptly.

The manner in which this special combination acts would seem to be as follows: The hyoscine, morphine and cactoid has its usual narcotic effect and produces some relaxation; the novocaine, when perineurally injected, relieves the spasm of the muscular coats of the ureter, while the adrenaline promotes sufficient urinary secretion to force the calculi into the bladder by direct pressure. Furthermore, the pain-spot, as indicated so invariably by the patient, is in proper anatomical relation to the trouble, being located

directly over the point of emergence of the spinal as well as the sympathetic nerve supply of the ureter.

Owing to a protracted personal disability, I have not been in position since then to utilize this combination in other cases of impacted calculi; but the consistent manner in which it negotiated the voiding of calculi in this one particular patient in more than thirty consecutive instances would seem to warrant its trial by other clinicians.

Whereas my patient presents a record of hundreds of impactions lasting from a few hours to fourteen days, since the time the perineural injections have been instituted not one impaction has lasted more than six hours, irrespective of the size of the stone; and, as previously stated, one calculus passed into the bladder within ten minutes after the injection.

Although over thirty perineural injections have been given this patient in an area within the circumference of a silver quarter, and although these injections extended over a period of several months, there has appeared neither any local reaction at the site of injections not any subsequent pathologic lesion of the underlying tissues.

Further clinical tests of this method of combating the impaction of kidney-stone would seem to be warranted as a last resort before proceeding to catheterization of the ureter or operative interference, particularly as it is a method that can be employed by the general practitioner under any circumstances and is, apparently, devoid of any danger.

Infantile Intestinal Infections

Modern Principles of Treating Them

By THOMAS G. ATKINSON, M. D., L. R. C. P. (Lond.), Chicago, Illinois
Clinical Professor of Pediatrics, Chicago College of Medicine and Surgery

IN THE light of the recent research-work done in pediatrics, chiefly by the Italian school, it is quite evident that we must greatly modify, if not altogether revise, our views upon infantile intestinal infection. These investigations show, beyond question, that the milk can no longer be regarded as the prime factor in the etiology, but that we must look to the physiological peculiarities of the intestinal tract itself, and especially to the peculiar character of the intestinal flora, to explain the disease.

Experiment and observation have demonstrated that the trouble comes about by the interplay of two characteristic conditions in infantile physiology and bacteriology; namely: (a) The inadequacy of the digestive function. By which is meant, not its insufficiency for normal demands, but its incapacity for adjusting itself to extraordinary requirements. (b) The consequent readiness with which the intestinal flora multiply and become malignant under digestive disturbances.

Food Changes Which Favor Bacterial Activity

Any marked change—and often even a slight change—in the quality or quantity of the food quickly brings about such a disturbance in the character and distribution and behavior of the intestinal bacteria that they cease to be normal, and many of them become pathogenic. Cooley says: "Species which before were benign become highly malignant; normal types, while retaining their physiologic character, lose their power of resisting invasion by pathogenic types; or they disappear and are replaced by pathogenic germs." Thus, the net aspect of the entire bacterial field is changed from a benign, and even useful, activity, to a malignant infectious virulence.

Therefore, the transference of a child from human to cow's milk; a change in the quality of artificial feeding, such as feeding from a different cow; and even a change in the amount of the food, a simple matter of overfeeding; any one of these violations of the digestive function is sufficient to induce such a disturbance in the intestinal flora as to result in a severe intestinal infection.

Of course, I would not be understood as belittling the importance of the germ content of the milk itself, or as advocating a return to the old conditions of filth and sepsis which prevailed in the dairy and in the milk-can not more than fifteen or twenty years ago.

Certainly no one has any intention of reneging on the stand that was taken and the work that was done in denouncing and reforming these disgraceful conditions. That

was all exceedingly necessary and valuable work in the clearing up of the situation. But it has not solved the problem; and we find ourselves now confronted with another aspect of the question.

Present-day investigation shows that, within reasonable limits of cleanliness, it is not so much a question of the bacterial content of the milk, as it is of feeding as nearly as possible to normal, and avoiding violent changes in the quantity and the quality of the diet.

Without pretending to enter here upon any lengthy or detailed discussion of the vexed question of milk sterilization, it might be remarked, in passing, that there is at least the danger in all the current methods of artificial sterilization that they may defeat their own end; for, if the processes be not accurately carried out or if they be not uniform from day to day, they are quite likely so to vary the physical qualities of the milk as to induce violent disturbances of digestion, and in that manner bring about the very troubles that they are designed to forestall.

Principles of Prophylaxis

The keynote of modern prophylaxis in infantile intestinal infection, therefore, is to maintain normal feeding, as nearly as possible, both as to quality and as to quantity; that is, to adjust artificial feeding as nearly as may be to the natural feeding conditions pertaining to the age and weight of the child, and to avoid all violent changes of quantity and quality in the food.

To this end, the American practice of feeding by the percentage-method is, I think, much more favorably adapted than the German habit of feeding sheerly according to calorie calculations. The ideal way, however, is, to combine the two methods; or, rather, to proceed according to each method, and then to adjust the one to the other. It is a comparatively simple matter to first calculate the percentage-basis which is proper to the child's age; next to estimate the calorie requirements of the child's weight; and then to make up a correct calorie mixture according to the percentage-table.

But what, in my judgment, is still more important, because it is so little recognized and practiced, is to insure uniformity in the quality and character of the milk. This can be effectually accomplished only by insuring uniformity in the source of supply.

And here is one of the most fruitful causes of trouble in dairy milk as ordinarily purveyed by city dealers. They "shop" for their milk, buying it here, there, and everywhere; or they receive varying proportions from various dairies; or they purchase from one dairy one month and from another the next; and the consequence, in either case, is, that the physical character and quality of the milk differs from time to time to a very marked degree. For a long time I have been convinced that this feature of the milk supply constitutes a very real and common danger; and the results of recent investigations in intestinal infection give my convictions almost scientific certainty.

There is no doubt that many a case of summer-diarrhea gets its start in the way here indicated. One fine day the milkman leaves at the door a supply of milk, just as sterile as it always is, measuring, perhaps, up to the required standards of richness and caloric value, but altogether different in physical character, because from an entirely different dairy. The child's digestive function, already reduced by the hot weather and other conditions to the minimum capacity for adjustment, rebels against the rather violent change, the intestinal bacteria are deranged, and the mischief is done.

All of which, of course, may happen without any deliberate transgression, even without any carelessness, on the part of the milkman, who doubtless is doing his best according to his lights and according to the municipal requirements laid upon him.

Exactly how this particular phase of the matter is to be regulated I am not at present prepared to suggest. But there ought to be some way, surely. Just now I am arguing the baby's brief rather than the city's. From the baby's standpoint, it is important that the milk be furnished from a herd of cows, instead of from single animals, so that the average quality and character of the product may be fairly uniform. If this is impracticable, the next-best thing is to draw the supply from one cow the care and feeding of which are under constant observation and control.

Principles of Treatment

When infection has occurred, the keynote of modern treatment is, to adjust the dietetic balance and to give prime attention to the intestinal tract itself.

Clinically, therefore, treatment resolves itself into the carrying out of four prime principles; namely:

1. To give the gastrointestinal tract physiologic rest.

2. To remove as much as possible of the offending elements.

3. To stimulate the natural defenses and restore the dominance of the normal flora.

4. To assist these defenses with local antisepsis.

Physiologic Rest

The first step in the adjustment of the dietetic balance is, to stop food altogether and to clear out of the gastrointestinal tract whatever lienteria may be there. The unfailing rule, therefore, is, to withhold all food for the first twenty-four hours. In breast-fed children, this usually is sufficient; and thereafter feeding may be cautiously resumed. In bottle-babies, however, it is necessary to maintain a certain degree of functional rest throughout the disease, at the same time supporting the child's strength with adequate nourishment.

The rule is, to withhold or to reduce to a minimum those food-elements which cause specific trouble. If the disturbance is chiefly in the upper bowel, where sugar and carbohydrate fermentation is common, these foodstuffs should be cut out of the diet. If in the lower bowel, where albumins are attacked, the decomposable albumins are to be withheld. In these latter cases, whey and buttermilk are an excellent substitute for milk. In all cases, barley-water is ideal.

Removing Noxious Material

It is during the first twenty-four hours that we must expect to do all that can be done in the removal of germs and germ-laden material. Sufficient cathartic (calomel, or blue-mass and soda, or phenolphthalein) should be given to produce two or three good evacuations, to be followed by a thorough irrigation of the colon and lower bowel with warm sterile water or some mild, unirritating antiseptic solution. After the tract has once been thoroughly cleaned out, it is not wise to aggravate it again with catharsis during the entire course of the disease.

Stimulating Natural Defenses

The assistance of the natural body defenses consists in not-doing rather than in doing. Experience teaches that we are powerless, either by way of passive immunization or by introducing alexins, to increase the infant's body defenses to any appreciable extent. The important thing is, that we shall not do anything to hamper or hinder with any meddlesome activity. Especially, bearing in mind the important part played by the intestinal secretions in the battle against the germs, it is the apotheosis of irrationality to check their flow or inhibit their action by the use of opiates or astringents.

About the only positive way in which we can assist the defensive process is by keeping the intestines well distended with fluids, which stimulates, in natural fashion, the flow of the secretions. This is to be done, not by enemata, but by hypodermoclysis of normal salt solution. The fluid is then absorbed normally and secreted into the intestine.

Reinforcing Natural Defenses

While we cannot positively assist in the natural defenses of the body, we can do a great deal to aid them by subtracting from the task which they have to perform; i. e., by inhibiting many of the pathogenic bacteria in the bowel before they enter the mucosa, thus preventing them from going into the battle at all, and lessening the number and strength of the enemy with which the body defenses have to contend.

Indeed, this is really the only truly positive phase in all our treatment of these infections. This is where intestinal antisepsis and intestinal antiseptics have their most logical, as well as their most effective, field.

It is not the purpose or function of this paper to deal with the details of treatment, but only to set forth the principles of treatment as made clear by the most recent observations of the disease. Therefore, I shall not enter into a discussion of the various ways and means to be employed in carrying out the disinfection of the gastrointestinal tract, leaving that for someone else to do, but shall content myself with emphasizing the truth that, in the light of our modern knowledge on the subject, gastrointestinal antisepsis assumes a role in the treatment of infantile intestinal infections second only to the dietetic feature, if not equal with it.

This antiseptic measure must be both general and local—the internal administration of antiseptic remedies, such as the sulphocarbolates, galactenzyme, and so on, and the local instillation of carefully adjusted antiseptic solutions. It is advisable, in the acute stages of the disease, not to use the high colonic method of injection in making these local antiseptic applications, for fear of traumatizing the already congested and sensitive bowel, but to confine local measures to the lower bowel, depending upon internally administered antiseptics to take care of the upper intestinal tract.

The Native Korean Doctor

His Method of Treating Disease

By MARY S. STEWART, M. D., Seoul, Korea

TO appreciate fully the science of native Korean medicine, the doctor and his practice, you must become acquainted with the man. That you may see him as I saw him the first time, I'll relate an incident that happened at my clinic.

A large, dignified old Korean gentleman stepped daintily over the feet of the women and children awaiting their turn for treatment. His dress was that of wealth and of refined life: black velvet sandals, white cotton stockings padded with cotton to make them warm, large baggy trousers of white silk, also lined and padded with cotton, tied tightly about his ankles with a pale-blue ribbon, a lavender-colored brocaded silk vest with long sleeves, a long, pale-blue silk coat fastened over the breast with a daintily tied narrow ribbon of silk of the same color, his head covered with a small black hat made of horsehair and bamboo, while through this you could see his top-knot of hair, for he wore his hair done high up under his little hat.

The man's hair and mustache and tiny chin-beard were white, and as he sat down upon the patient's chair and looked at me with his soft black eyes and kindly face I immediately fell in love with him. He said he had been sick three years and could I cure him. He would not give me much of a history, too many women listening. Making a safe diagnosis, we gave him some mercurial ointment for his sores, a 16-ounce bottle of a solution of sodium iodide, and charged him two yen. When the man had gone my helper said, "Doctor, you should have charged him more. He is a rich old Korean doctor." Since then he has sent to me many members of his household and many hundred patients. Inquiring one day how the old doctor had "become," I was told he was *tä-nä-so* (all well).

My most difficult and trying work is undoing what he and others like him have done. However, there is really a crude or imaginary science of their medicine. I was shown a large number of medical books—four and five hundred years old. These books have crude outlines of plants, minerals, bones, and other materials used as medicine. However, I have been told that the science as practiced today is just the same as it was 5000 years ago, with the exception of the use of the "chim."

The Wonder-Working Chim

This chim is his all-around surgical instrument. It is long or short, slender or thick, according to the location where it is to be used. If a man has eaten too much, so that it is difficult for him to breathe, put the chim into the second joint of the thumb, it gives instant relief. That it may do better work, it is first run through the top-knot of hair. Yesterday I pulled a tooth for a child and found protruding from the end of the root a piece of a chim. I asked about it and found it had been put in to cure the toothache and it broke off.

A boy seven years old was brought to me on the back of his mother. At first she only gave the history of a sore leg. We put him upon the table. I inspected a fracture, gave him some chloroform and asked more questions, and found that ten days previous he was run into by a man with a bicycle, and his leg swelled badly, and so they took him to a Korean doctor. He put his chim into the sorest place. I found a fractured tibia and an awful infection from the chim. the leg terribly swollen from toe to hip. The leg was saved. Forty-two days he was brought to us on the back of his mother.

One of my helpers was sent to me with a swollen knee. She had had the chim put into it to the bone seven times, but the swelling kept getting more painful. Later I took a half pint of pus from it, the result of the chim.

I was summoned very early one morning to go "born" a baby. The mother had been trying to born it for seven days, and for three days the *o jum* (urine) had not come. All this I was told before I started for the home. Half of the trouble they never told. They had called a Korean doctor. He had put his chim down through the abdomen to bring the urine, but it did not come. The woman became unconscious. The Christian doctor was now expected to perform some miracle and "put life into her." The chim must have

been a long one, for it had pierced the fetus. Two weeks later this woman came to the dispensary with her paltry offering for my saving her life.

There are other mechanical practices used by the native doctor in healing. The number of times a child has had spasms can be told by the round "shiny" places upon the child's head where there is no hair. A live coal is placed upon the head as a means of restoring "life."

When a woman from some cause or other does not menstruate, she is burned over the pubes. I have had many patients nearly dead from tuberculosis, menstruation had ceased, and the patient had been horribly burned. For pain anywhere along the spine I have seen horrible burns made.

Strange Obstetric Practices

We have many cases of prolapsed uterus, where the uterus is entirely outside the body. The method of treatment to persuade the uterus to return is unique. A string is tied around the body of the uterus and to the other end of this string is fastened a wad of cotton saturated with coal-oil and set on fire. When the uterus feels the fire it flies back into place within the body. I have had some of these cases where the poor creatures were most fearfully burned: flesh sloughing, uterus closed and filled with blood.

One woman came to us 250 *li* (84 miles), walking most of the distance, who had been treated in this manner. It was my first case of this kind. The uterus was nine inches in circumference, filled with blood, and discharging blood at every step. Nothing in any medical book or anything I had ever seen could tell me what to do. She went home a month later, with the organ within her body, and though not wholly well she carried away with her a great confidence in the skill of the Christian doctor.

I am called to the homes many a time to remove retained placentas. As the home work is to be another story, I wish to tell of a case of this kind that came to the dispensary.

The patient lived 60 *li* out of the city and came this distance in a Korean chair, four coolies, and a retinue of relatives and friends accompanying her. This is the history. "Forty-one days ago she borned a baby, but the afterwards did not come. We waited, it did not come, so we called a doctor, and he gave her much strong medicine to eat and burned her where the *tah* is, but it did not come, so we called a sorceress. She rang bells, found a pan, boiled tigers' teeth and claws and gave her the water; still it did not come. We spent much money, *pak won* ($50 gold). Now, *wee-won* (doctor), we want you to cure her."

It was on Saturday, when we have no clinic. My helpers put the sick woman upon our operating-table, and cleaned her up, while I silently asked for wisdom and power to save the woman. Her temperature was subnormal. We placed bottles of hot water about her, gave her strychnine, nuclein, and hot malted milk, and let her rest half an hour; then we curetted. We left her upon the table till 6 o'clock, when we again flushed the womb. The next day they took her home, paying me 35 sen ($17.50 in gold) for saving her life. Months later I was called to that woman's village upon a similar case, and my former patient came out a long distance to meet me. It was she who insisted I must come for the other woman.

I have in my detention-room now an insane girl of 20 years. Her flesh was, in plain language, black and blue. Upon inquiring, I learnt that it is a method of treating insanity caused from eating opium. A blind man is hired to beat out the evil spirit.

I asked my old Korean doctor to name me his three best medicines. He replied we have only two great medicine and about five hundred small medicines. His two great medicines are, first, dried and powdered deer's horn that is gathered when the horn is red, and the other is ginsing. Some of his other most powerful drugs or medicines were bear's liver, tiger's bones, copper, and iron rust. I have been told that the native doctor also uses the following of our familiar drug-plants, viz.: pulsatilla (with beautiful red blossoms), aconite, digitalis, arnica, convallaria (grows in great abundance on mountain sides), taraxacum, and gentian (not the variety we use, however, but a white-flowered one). I hope to make quite a complete study of medicinal plants found here.

Among the ointments used, there is one for burns made from charred rice, straw and sesame oil. Cut tobacco or common smoking tobacco boiled in sesame oil to form a paste is used for cuts, bruises, stings, and swellings of many kinds. A poultice made from rice flour and honey and applied hot is much used. A thick paste made of pounded cooked rice, placed between two pieces of linen and kept hot, I found used in a Korean home. I have since used this poultice upon some foreigners having pleurisy and pneumonia, with splendid results.

The Use of the Obstetric Forceps

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois
Professor of Obstetrics in the Medical Department of Loyola University

EDITORIAL NOTE.—In two preceding issues Dr. Rittenhouse has given us important facts concerning the forceps and its use. This month he carries us still further in its application to various conditions. The series on this instrument will be concluded next month.

The High Operation

THE application of a forceps, when the child's head is at or near the superior strait, is a very different affair from its application in the lower part of the pelvis. It requires more skill, more force must be used, a different movement of the blades is required, there is more danger of inflicting injury upon mother or child, and complete anesthesia is required, not only to facilitate the application, but because without anesthesia it would be too painful to be endured.

The indications for the high application are not as frequent as is generally supposed. It is undoubtedly true that high application many times is resorted to when an easier and safer way out of the difficulty might be found. It is not an uncommon thing for the doctor to discover that with growing experience he finds himself resorting to the high operation less frequently. I tell my students that, as they increase in experience, they will depend more upon brain and less upon muscle. Sometimes I put it in this way: The most important thing to learn about the high operation is how to avoid the necessity of it.

Difficulties of the Occipitoposterior Position

For example, a doctor with limited experience encounters an occipitoposterior position. As so often happens under these circumstances, the first stage of the labor is extremely prolonged. Dilatation makes little progress, and the head fails to descend. Finally the woman becomes exhausted, and the doctor feels that he must do something. Perhaps he decides upon the high forceps without even ascertaining the cause of the delay. The result is disaster. Even if he succeeds in effecting a delivery, it is at the expense of injuries inflicted upon both mother and child, and the doctor goes home with every muscle in his body aching from the hard pulling, and his mind filled with disgust for the practice of obstetrics. How many of us can look back upon such an experience! Thousands of infants have been sacrificed in just this manner

In such a case as that here described, the safer and easier method would have been to make an early diagnosis of the position (under anesthesia if necessary), then introduce the hand, lift the head a little above the brim, rotate the occiput to the front, and then either allow nature to complete the delivery or aid with the forceps, as might have seemed indicated. In the second event, the forceps delivery would usually be a simple affair.

Sometimes, when there is inertia of the uterus, the high application may be desirable; although usually it is best first to try to awaken the sluggish uterus by the use of oxytocics, such as quinine, strychnine or ergot. The latter is objected to by many before delivery, but in my own experience its cautious use has never given me cause for regret. The reports on pituitrin seem to indicate that it has value.

Narrow Superior Strait with Slow Cervical Dilatation

Where a narrow superior strait prevents the descent of the head, the high forceps may be successful; but the difficulty is always increased by the partially dilated cervix being wrapped around the child's head and so increasing its diameter. Nature rarely achieves complete dilatation of the os as long as the head is arrested at the superior strait. So, when the forceps is applied high, a good deal of attention must be given to completing the dilatation before severe traction is made. The cervix wrapped around the head adds to its diameter at least a fourth of an inch—not a trifling matter when the head fits tightly.

A good plan is, to alternate intervals of moderate traction with efforts at dilatation. Pull moderately for several seconds, then relax and with the fingers try to push the cervix above the equator of the head. Once the cervix has slipped over the equator and out of reach, then stronger traction may b

made; and success will crown the operator's efforts unless the disproportion between brim and head is so great as to require craniotomy or cesarean section.

It is well to remember in this connection that a somewhat larger head can be delivered by podalic version than by means of the forceps in a head presentation, because the head is a wedge, of which the chin is the small end—and a wedge always will pass more easily small end first. A forceps may be applied to the aftercoming head, if desired. Another useful point about podalic version is, that the fetal pelvis may be purposely delayed in the mother's pelvic canal molding the soft tissues and crowding them aside, thus making more room for the aftercoming head.

Mode of Applying the Forceps

As intimated above, it is far more difficult to apply the blades at the superior strait than in the lower part of the pelvis. In the low operation, the blade slips into place by an easy curving sweep requiring little force. In the high operation, the instrument must be introduced more nearly in line with the axis of the mother's body, and some force is required to crowd aside the soft tissues, enough to allow the blade to slip around the head. Especially difficult is the application of the second blade. The first blade is in the way, and by an assistant must be depressed toward the coccyx, as far as possible while the operator introduces the second.

Once the blades are in place, the next thing is, to lock them, and this sometimes is quite difficult. In case difficulty is experienced, much force should not be exercised; however, *by depressing the handles far toward the coccyx* a little gentle manipulation will cause them to lock without resort to violence. Of course, this depression of the handles is impossible unless the patient lies across the bed, with hips brought to the edge—and the high operation should never be attempted in any other position.

Axis Traction

Axis traction is so called because the axis of the superior strait is a line pointing very nearly toward the coccyx, and traction at first, to be most effective, must be in this line, that is, backward, as well as downward. Tarnier devised a forceps with an extra attachable handle, by means of which an assistant could make traction backward while the operator pulled downward.

The fact that such a special instrument is seldom at hand when wanted, led me to devise a substitute; which may not be original with myself, still, I have never seen any reference to it in the literature upon obstetrics. This substitute consists of a fillet or strip of gauze, which I slip through the fenestra of both blades after they have been applied and locked. Then while I pull on the handles an assistant pulls on the fillet in the direction of the coccyx. As soon as the head begins to descend in the pelvis the fillet is removed. Tarnier put a curve in his extra handle, to avoid pressure upon the perineum; but the perineum is so elastic and movable that I have not found the gauze fillet tending to injure it.

Use of the Forceps Upon the Aftercoming Head

In all forms of breech and footling presentation, the forceps should be at hand ready for instant use in case the delivery of the aftercoming head is delayed. When an infant is all born except the head, the pressure on the umbilical cord cuts off all placental communication; and, as breathing is not yet established, death will supervene in a very few minutes if the head cannot be promptly delivered. The quick application of the forceps is necessary if the ordinary means of delivery fail.

In probably a majority of these cases delivery can be accomplished by combining the following expedients: a pull of not over fifteen pounds on the body; a pull on the lower jaw with the hooked forefinger, the limit being the strength of the finger; downward pressure above the pubes by an assistant. If these efforts are not successful in one minute, it is usually better to apply the forceps. There is no special difficulty in this, provided the fetal body is turned up over the mother's abdomen, if its face is toward the sacrum, or in the opposite direction, if the face is to the front.

Use of the Forceps Upon the Breech

The application of the forceps to the breech I mention only to condemn it. When a breech presentation needs assistance, that assistance can be given in a safer and more rational way. The shape of an infant's pelvis is so ill-adapted to the grasp of the forceps that injury is almost inevitable. If a breech-case makes so little progress that help must be given, it is both easier and safer to reach up and bring down one or both legs.

The use of the forceps for preventing laceration of the perineum will be discussed in a separate article.

(*To be Continued.*)

Tea and Its Adulterations

By C. F. LYNCH, M. D., Chicago, Illinois

EDITORIAL NOTE.—This is one of a series of articles upon "Foods and Their Adulterations," which have been appearing in CLINICAL MEDICINE *for several months. The physician who desires to be familiar with this subject should read every number.*

TEA, next to coffee, is the principal beverage of the average American family and constitutes a prominent item in our import trade, especially from those countries the products of which reach our shores by way of the Golden Gate. Approximately 50 percent of our tea comes from China, 40 percent from Japan, and the remaining 10 percent from Ceylon, India and other points in the East Indies.

The plant which is the source of all the varieties of tea (of which there are legion) is the camellia thea, or thea chinensis, as it is more commonly known. In the classification of the various teas on the market the different trade-names do not indicate teas derived from different species of the tea-plant, as is commonly believed, but rather have been applied to designate the age and position of the tea-leaves as they are gathered.

Flowery pekoe, or pekoe-tip, tea is the choicest of all teas found in the Celestial kingdom, and, like the choicest Georgian watermelons, it is limited in its consumption almost exclusively to the country of its origin. This tea is prepared from the youngest leaves of the tea-plant, which are practically only budding leaves found at the ends of the shoots from the main stem of the tea-plant.

Orange pekou and pekou teas come next in order as high-grade teas. These also are prepared from very young, tender leaves, and are of most excellent quality. The class of teas next in value, in the opinion of tea-experts, is the souchong. Of this grade there are two varieties—souchong 1st and souchong 2d. The grade of tea after the souchong varieties is the congou tea.

We also have another classification of the teas, based on the gross color appearance, namely, green and black teas. Here also there is a generally prevalent impression that these two classes of tea are derived from different plants. This idea is erroneous, however, as both types are derived from the same plant, but the gross appearance in each case depends on the method of curing or handling of the gathered leaves.

In preparing green teas for the market, the leaves are first steamed and then immediately dried, thus retaining the natural color to a great extent. Black tea is exposed to the sun and undergoes a process of oxidation or fermentation, which results in a loss of the normal chlorophyl and a consequent black color of the finished product. In this process of oxidation and fermentation the tea-leaves give up an appreciable amount of their tannin, and hence the black teas are considerably less astringent than the green varieties.

The various grades of tea all contain a certain percentage of an alkaloid known as theine, which is practically identical with caffeine, the active alkaloid of coffee, and to which the stimulant property of both these beverages is due.

The teas coming from India are as a rule much stronger than those of Chinese and Japanese origin, one part giving an infusion as strong as do three parts of that coming from the tea-fields of China and of Japan.

In the handling of teas in India the processes have been very much modernized as compared with the many manipulations practiced in China and Japan. In India the greater part of the work is now done by machinery, thus materially reducing the sources of contamination incident to handling by human hands. This is especially opportune, as a comparison with the Chinese teas, where all the manipulations are done by hand and in some cases even the feet are used in handling the cheaper varieties, readily shows.

Adulterations of Tea

In the trade manipulations practiced in the tea-industry the artifices resorted to are of a nature which, while they can hardly be classed as deleterious to the health of the consumer, are such that they are to be condemned from the point of fraudulent misrepresentation.

Among the "tricks of the trade" which have been repeatedly discovered in the analysis of tea samples, the following practices are of sufficient importance to deserve consideration. (1) Facing; (2) the addition of spent or partially exhausted leaves; (3) the addition of foreign leaves; (4) the addition of foreign astringents and substances

designed to affect the apparent strength or quality of the product.

This is one of the oldest tricks of the tea-industry, and consists in treating the leaves with a coloring mixture for the purpose of giving an added gloss or color, by means of which leaves that have been damaged in the process of handling or which because of their age and natural color are of an inferior quality may be so improved in appearance as to enable the dealer to sell them at a price far in excess of that to which their real quality entitles him. Among the more commonly used coloring agents employed in facing are prussian-blue, indigo, turmeric, and plumbago. Soapstone and gypsum are also commonly added to the mixture to aid in the facing process.

Teas intended for home consumption by the Chinese and Japanese are not put through this facing process. Those intended for exportation are the ones which are the recipients of this irrational treatment.

So far as the danger to health is concerned, there is little or none associated with this procedure. True, prussian-blue is regarded as a more or less injurious substance, but the amount necessary for use in the facing of an entire pound of tea would not be sufficient to produce marked physiological effect if taken in one dose, so that the minute portion represented in an ordinary cup of tea is scarcely worthy of consideration. This fact of harmlessness, however, does not excuse the use of the substance for fraudulent purposes in another direction, namely that of deception as to quality of the leaves themselves. There is no reason why a dealer should be allowed to apply a beautifying treatment to a 25-cent tea and sell it for 50 cents just because he can do so with preparations which won't kill the consumer.

If this same consumer were to treat a five-dollar check so as to make it read fifty dollars and pass it off on this same dealer, he would raise his voice in a righteous howl for a penitentiary sentence for the perpetration of this fraud that could be heard at the gates of St. Peter—but let anyone protest against his fraud which robs the purse of the poor widow as well as the table of the orphan, and he immediately protests that he is the victim of persecution.

Any man who wilfully adds any agent to an inferior product for the purpose of so improving the appearance of that substance as to command for it the price of a superior article, be it fruit, tea, coffee, wine or what not, is a pure and simple counterfeiter and forger and deserves to be dealt with as a common criminal, and not as a violator of the civil code. His proper place is as an associate of the other criminals of his class in the cells of our penal institutions. By comparison, his crime is by far the more hideous, for he seeks to defraud those who can least afford it, while the forger and counterfeiter usually seek as their victims those who are not materially effected by the loss.

Facing usually is easily detected with the microscope. A portion of the leaf is simply mounted and examined as an opaque object. The coloring matter can be detected as small dots.

In making an examination for prussian-blue, the leaves may be shaken with water and the detached particles examined under the microscope. If prussian-blue is present, transparent brilliant blue particles will readily be seen. Further proof of the presence of this substance can be found chemically by treating the detached particles with hot sodium-hydroxide solution, which discharges the color. This solution is then acidulated with acetic acid and ferric chloride is added. A characteristic blue precipitate is formed if prussian-blue is present.

Turmeric is identified under the microscope as round yellow cells filled with starch granules.

Indigo presents a greenish appearance under the microscope. It is not soluble in sodium hydroxide, thus distinguishing it from prussian-blue, but is soluble in sulphuric acid, with which it gives a deep-blue color.

In the palmy days, before the bugbear of pure-food laws and government inspectors, a very profitable practice in the tea-industry was the use of spent, or exhausted, leaves as an adulterant. Spent leaves are leaves which have been once steeped and afterwards rerolled and dried. This offered a fruitful source of profit in its day, but has had to be largely abandoned with the introduction of present-day inspection methods.

This was another bonanza for the dishonest tea-merchant of ante-food-inspection days, and is so profitable a practice that it is by no means entirely dead at the present time in certain quarters. If anyone thinks that these profitable frauds were all abandoned as soon as the Pure-Food Law was enacted, they have another guess coming. True, the more easily detectable frauds have perforce been thrown into the scrap heap, but in their place have been introduced new and more intricate deceptions which are being unearthed every year. The best brains ob-

tainable are employed in many instances for the sole purpose of devising new methods of adulteration which will supplant the older ones and baffle the skill of the inspection departments of the state, city and nation.

As examples of some of the more recent endeavors along this line might be mentioned the homogenizer for preparing an artificial cream, the introduction of agar-agar as a pure jelly, the use of stearin to replace the more expensive cacao-butter in chocolates, and the use of phosphoric and other acids as an aid in the manufacture of jellies, as well as the many expedients which are being resorted to to give the oleomargarin a color resembling that of natural butter without violating the law.

It must be said in justice to a large group of honest manufacturers that they are making every effort to produce a really pure and wholesome product without the use of adulterants, and, as has been stated in previous papers of this series, these dealers deserve the hearty support of all classes and trades, and above all others the support of the members of the medical profession.

Among the foreign leaves that have been reported in tea samples from time to time by various analyses, are willow, poplar, birch, rose, elder, and elm-leaves. In examination of tea samples for the presence of foreign leaves, the dried leaf should be soaked in water, unrolled and placed under the microscope or magnifying glass. The genuine tea-leaf is very characteristic in its appearance. The upper three-fourths of the outer edge of the leaf presents a typical regular serration extending to the tip of the leaf. The veins of the tea-leaf also show a characteristic upward loop at their outer extremity.

"Lie tea" is a term applied to a mixture composed of tea dust, stems, fragments, sweepings, foreign leaves, gums, mineral matter, etc. It resembles very much an old-time gun-shot prescription and was commonly met with in the tea-markets of the United States and England a few years ago. Its sale has now been largely abandoned, due to the activities of the food-inspection officials.

Teas are sometimes found in the market which contain added astringents for the purpose of giving the appearance of possessing greater strength than they naturally possess. Catechu has been the favorite substance for use in this direction and is especially efficacious in improving the appearance of the infusion made from those teas which contain a considerable quantity of spent or exhausted leaves.

Sulphate of iron has also been occasionally found. The purpose of this latter addition has likewise been to deepen the color of the infusion and add to its astringency.

The Eye

By JAMES A. De MOSS, M. D., Thayer, Kansas

1

What architect could plan and build
This sphere of sense? And he so skilled
That he this wondrous organ willed,
With imagery illumined, filled
With varied light?

2

'Tis here again.
We see the work of hands divine;
Marvels of beauty, perfect, fine;
A work complete in every line;
Which all in harmony combine
Surpassing man.

3

Here doth the soul
Envisioned look from out its cell,
Discerning facts, doubts to dispell,
And by them all its fears to quell,
To learn and know that all is well
As years may roll.

4

So full of light
The body is—this templed clay—
Lit by the beauty of the day,
By shining suns so far away,
Of many shades and changing ray-
Dispelling night.

5

Soul-windows they.
The fire within doth flash and glow,
Thoughts leap and strive to outward flow;
The sweep of vision to and fro
Invites men forward e'er to go—
Day after day

WHAT OTHERS ARE DOING

ATROPINE IN THE TREATMENT OF PHOSPHATURIA

Umber (*Therap. d. Gegenw. Nouveaux Remédes*, 1913, 30, 182) advises the cautious administration of atropine, in 0.5 mgm. (1-128-grain) doses after each meal, in order to increase the acidity of the urine and thereby check phosphaturia. He says that, if necessary, the dose may be increased to 1.0 mgm. (1-64 grain) and continued for a fortnight, when it may again be reduced to 0.5 mgm.

BACTERINS IN OESTETRICS

S. C. Mason (*Medical Council*, June, 1913) writes that he uses a combination bacterin containing streptococci, staphylococci (albus, aureus, and citreus), pneumococci, and colon bacilli in all of his obstetrical and surgical cases. [This combination is known as the Van Cott bacterin.—Ed.]

Dr. Mason states that the use of this bacterin gives him a strong feeling of security. Those who employ it claim it to be an effective prophylactic of septic complications in the puerperal state. A number of surgeons now resort to it whenever they have to repair the perineum or cervix.

SOME USES FOR QUASSIN

According to Pigeaud (*La Dosimétrie*, March, 1913), crystalline quassin is one of the best of our bitters. It decidedly increases the appetite, has a marked tonic action, and is also stimulant to the relaxed muscles of the intestine and adnexa. He also asserts that it had a decided anticongestive action upon the liver and, given in association with boldine, it increases the secretion of bile. Through its stimulant action upon the intestine, it promotes contraction of the bowel, thus favoring the passage of the bile and even of biliary calculi. Pigeaud says it should be employed to reinforce the action of boldine in hepatic colics and in cases of icterus owing to retention; indeed, even in some cases of cirrhosis.

Quassin should be employed in the treatment of chlorosis, and of other chronic diseases where increase of the appetite is indicated. He advises the association of strychnine arsenate, iron arsenate, lithium benzoate, and quassin in the treatment of diabetes.

THE INTESTINE IN TYPHOID FEVER

According to *Paris Médical* for December 21, 1912, Dr. Triboulet stated, at the meeting of the Société Médicale des Hôpitaux (Paris), that it is possible to follow the various phases of intestinal reaction in typhoid fever septicemia by simple and practical coprologic investigations.

Ochre-colored stools are characteristic of normal typhoid fever; certain forms of diarrhea are due to discharges produced by biliary infection. These forms of defecation indicate a less serious type of typhoid fever. Diarrhea forms a complication of the disease if it is accompanied by mucus and by blood. The presence of the latter in normal stools should arouse suspicion of intestinal trouble.

Sometimes intestinal insufficiency, with collapse, may be observed, and it may be asked whether this serious occurrence is not a most important element of the severe intestinal forms of typhoid fever and it if does not stand in relation to an insufficient functioning of the glandular apparatus.

SOME USES FOR PILOCARPINE

Geo. E. Nour (*Medical Council*, June, 1913) advocates pilocarpine as a useful remedy in the treatment of pruritus, especially of pruritus vulvæ, which, he says, is relieved by 1-4- to 1-8-grain doses of the nitrate or the hydrochloride. He has also repeatedly found this drug of value, hypodermically given, in 1-20-grain doses, gradually increased to 1-4 grain, in the treatment of tuberculosis. This application, however, certainly should be qualified, on account of the depressing character of the drug. The pilocarpine assuredly is contraindicated when the patient is suffering from night sweats.

The author claims that pilocarpine in small doses, taken by the mouth with pepsin and hydrochloric acid, by greatly increasing the mucous and salivary secretions of diphtheria patients, facilitates the expulsion of the diphtheritic membrane. For erysipelas, he recommends the use of fluid extract of jaborandi, although, certainly, the alkaloid pilocarpine is a much more serviceable and satisfactory drug in this disease. Pilocarpine is the remedy *par excellence* in the sthenic form of erysipelas; it should not be given in the asthenic forms of the disease.

Nour also finds pilocarpine efficient in several other directions; as, for instance, as a galactagog; amblyopia, choroiditis, iritis, and other eye affections; also in uremia and puerperal eclampsia; in mumps, eczema, herpes, prurigo, acne.

As Dr. Nour says, "pilocarpine is a charming remedy, but its depressing effect on the heart shoudl never be forgotten."

IRON AND ARSENIC IN ANEMIA

According to Swetkoff, in *Nouveaux Rémédes*, arsenic, when taken alone, does not appear to affect the character of the blood. It neither influences the amount of hemoglobin present nor increases the number of erythrocytes, while arsenic has a favorable influence on both. But here is a valuable therapeutic point which one should keep in mind.

The beneficial action of the iron upon the blood-content is markedly intensified when it is administered with arsenic. If this is done, in three weeks the increase of hemoglobin is three times as great as when iron is administered alone. Perhaps this fact, so beautifully brought out, may explain why it is that preparations like the arsenates of iron, quinine and strychnine, alone or combined, are so remarkably efficacious.

BENEFICIAL INFLUENCE OF ARSENOBENZOL UPON THE FETUS OF A LUETIC MOTHER

In a memoir upon the treatment of pregnant syphilitic women, published by the Medical Society of the Hospital of Paris (cf. *Zentralbl. f. d. Ges. Gynaekol.*, 1913, p. 106), Jeanselme, Vernes, and Block, in collaboration, detail their experience with salvarsan as a possible preventive of congenital lues. The results have been extremely encouraging; for, out of 18 women thus treated, 16 gave birth to living, viable children. Of that number of children, 4 died afterward of diseases not specific; while the other 10 have displayed not a sign of the infection after a considerable period of observation. As to the 2 dead-born fetuses, the authors assume that they already had died before initiation of the arsenical treatment.

A full description of the method of administering the injections of salvarsan is given; the average was about six doses in one-week intervals. The authors also tell of two habitually aborting women showing the Wassermann reaction which both had received since a salvarsan course, but up to the time of going to press they had not been threatened with abortion.

PITUITARY GLAND AS AN OXYTOCIC

The experience in 25 cases, in private practice, with pituitary gland for promoting labor-pains, leads M. Jacoby (*Zentralbl. f. d. Ges. Therap.*, 1913, p. 1) to recommend it for trial as an efficient, yet safe, agent for the purpose; moreover, he thinks midwives should be made familiar with its properties, so that they may be influenced, when confronted by cessation of expulsive pains, to call upon the doctor for its employment, instead of ignorantly proceeding with their intrauterine manipulations.

Dr. Jacoby has found the agent (he employed pituglandol-Hoffmann-LaRoche, 1.1 Cc., injected under the skin of the thigh) to act promptly (in 4 to 10 minutes) and vigorously, and continuing over three hours, while being regularly rhythmic, at all times when natural labor-pains were due, as at or near term ir in promoting spontaneous abortion in progress. In 4 instances, he made two injections, when contractions correspondingly increased in vigor. In 5 cases of artificially induced abortion, no uterine contractions could be induced.

CONNECTION BETWEEN THE CORPUS LUTEUM AND MENSTRUATION

Basing upon evidence obtained in 82 cases, R. Meyer and C. Ruge, of the Universal Frauenklinik at Berlin (*Zentralbl. f. Gynaekol.*, 1913, p. 101), find the following relationship to subsist between the formation of the corpus luteum and menstruation, in a normal 28-day cycle.

The follicle matures, in all probability, after menstruation is established, on about

the eighth day, although possibly during the period of flow; lutein formation starts within the second week, being in full operation after the middle of the third week after menstruation began, and at its acme just previous to that; retrogression takes place during the menstrual flow, this process occupying about two weeks for completion.

Put in a different way: First, hyperemic, stage of the corpus-luteum formation during the interval—stage of vascularization of the follicle at the entrance of the premenstrual phase; maturation during the advanced, premenstrual, stage; highest point of development of the follicle and of the mucous membrane shortly before the flow; retrogression of both during and after that period. The corpus luteum retains its fullest development during pregnancy.

RENAL IRRITATION FROM SALICYLATES OBVIATED BY ALKALIS

Previous assertions, notably by Frey, to the effect that alkalis are capable of preventing irritation of the kidneys by salicylates, are corroborated by Glaesgen, who reports (*Muench. Med. Wochen.*, 1911, p. 1125) his experience with 8 patients, 5 of these afflicted with polyarthritis. To his large doses of sodium salicylate or of aspirin, he added twice their weight of sodium bicarbonate; and in not one instance did albumin appear in the urine of these persons. He did not observe any diminution in the activity of the medicament.

BOILED VS. RAW MILK FOR INFANTS

That mother's milk is the best food for infants is now an axiom, but the question as to the relative value of raw and boiled animal-milk still is an open one. Of late, E. Janet has reinvestigated this important problem, both in his own extensive practice and by observation outside and by an exhaustive research in the literature.

Janet's conclusion is (*Ergebn. d. Inn. Med. u. Kinderh.*, 1913, p. 635), that there is no difference in nutritive value of boiled and unboiled milk when it is derived from an animal of the same species (i. e., cow's for calves, human for infants, etc.). On the other hand, if the milk is heterogenous (yielded by a female of a different species or genus), properly boiled milk is even superior to the raw.

In this country pasteurization is almost universally preferred to boiling. It is alleged that the latter process favors the occurrence of infantile scurvy; certainly it produces decided changes in the character of the milk, destroying the ferments, impairing the fat emulsion, precipitating the lime-salts, eliminating the natural antiseptic and antitoxic properties, favoring putrefaction, splitting up the lecithin, and impairing the taste. On the other hand J. S. Fowler ("Infant Feeding") says that "boiling the food for 5 to 10 minutes is (in temperate climates) perfectly safe and satisfactory, provided the milk has been kept clean and not more than twelve to fifteen hours has elapsed since milking."

HYOSCINE-MORPHINE USES

Gillet speaks highly ("Manuel Pratique de la Médication Hypodermique"), of the association of hyoscine and morphine, about which he says:

"The indications for this combination are very extensive. Its antispasmodic, sedative, and hypnotic properties are much more marked than those of morphine, and make it possible to employ its calmative action in painful and spasmodic conditions where morphine either does not act at all or acts poorly, as, for instance, in uncontrollable vomiting, convulsions, eclampsia, tic douloureux, rebellious neuralgia, insomnia, excitement of the insane, etc. Thanks to the corrective action of hyoscine, this combination may be administered to patients who bear morphine alone poorly, while in all its applications the likelihood of morphinomania is considerably diminished."

RINGER'S SOLUTION FOR THE TOXICOSES OF PREGNANCY

While citing previous reporters, Elise Eichmann, of the school for nurses at Osnabrueck, tells (*Muench. Med. Woch.*, 1913, p. 183) of her own success with injections (intramuscular) of Ringer's solution in the toxicodermias of pregnancy, and in other toxicoses, of pregnant women, including pregnancy-kidney, eclampsia, and the vomiting of pregnancy. The dose of the solution was 100 Cc., injected, preferably, intragluteally.

In addition to the injections, the patients were placed upon a strictly vegetarian diet; for, incidentally, the author rejects the placental theory of these toxicoses, but rather assumes their origin in alimentary intoxications. The Ringer solution, the authoress holds, dilutes the blood and favors excretion of the toxins through increased diuresis,

while the generation of the latter is minimized by the absence of animal food. Its formula will be found elsewhere in this department.

Isn't it interesting to note the increasing tide of *renewed* interest in intestinal toxemia as a factor in disease. Time was when scientific workers were inclined to pooh-pooh at it—but not now. The medical workers of the world have always known that it was of importance to "clean out, clean up and keep clean," even if they did not practice these simple expedients. So science and "empiricism" are ultimately compelled to collaborate.

Do not forget, when treating the toxicoses of pregnancy, the fundamental value of the gentle morning saline flush, nor the help to be obtained by intestinal antiseptics.

OXYGEN-THERAPY FOR TOXEMIA OF GESTATION

Arguing that during pregnancy the mother's body requires excess of oxygen, and assuming that some of the toxemias of that period (headache, edema, dyspnea, etc., the usual precursors of eclampsia) are the consequence of insufficient oxygenation, G. P. Shears reports in *The Medical Record* (1913, p. 66), that good results have followed, in several instances, from the liberal introduction, either by inhalation or injected, of the pure oxygen. He promises further reports; and this suggestion seems well worth following up.

ARTIFICIAL SERUMS

There is an interesting article upon the subject of artificial serums, by Gillet, in "Manuel Pratique de la Médication Hypodermique." The remedies of this class are resorted to in various grave conditions, when there is need of strengthening the heart, as in collapse, shock, and hemorrhage. Gillet says, however, that certain rules should be followed in using these injections.

Except in the treatment of profuse hemorrhages, there is no necessity for introducing large quantities. Doses of 30, 60 or 100 Cc. or more, repeated two or three times a day, suffice to produce a stimulant effect. But even these small doses may be dangerous if a serum containing chlorides is employed in renal or cardiac affections, in the course of which there is arterial hypertension, with chloride retention, as occurs in cardiac or cardiorenal arteriosclerosis, or interstitial nephritis, and when the permeability of the kidneys is much reduced. Here, sulphate of sodium replaces the chloride.

In acute affections, moderate doses (100 Cc. as a maximum) are the rule. However, in the affections accompanied by hemorrhage or considerable loss of body-fluid, abundant injections are indicated; for example, in infantile gastroenteritis, where 10 to 15 Cc. of the chloride solution may be given two or three times a day to a nursling weighing four to six kilos. For larger children, the dose may be increased to 200 Cc. in twenty-four hours. The injection should not be repeated more than on four days in succession. In cholera, in dysentery, and in typhoid fever complicated with intestinal hemorrhage, we may inject 1500 to 2000 Cc. daily by the intravenous route. As a general rule, the effect of these injections is excellent in all affections that are characterized by loss of body-fluid.

Postoperative traumatic shock accompanied by abundant hemorrhage also is a prime indication for abundant injections of artificial serum. On the other hand, in the acute intoxications, such as eclampsia, uremia, and diabetic coma, the utility of serum injections is problematic.

The artificial serum most employed consists of: chloride of sodium, 7.5 to 9 Grams; distilled water, 1000 Grams. The serum containing 9 Grams of sodium chloride per 1000 freezes at –55° C., the average point of freezing of blood-serum. Below this content of salt, the sodium-chloride solutions are slightly hypotonic.

The author then gives the formulas of a number of artificial serums in common use:

Hayem's Serum.—Sodium chloride, Gm. 5; sodium sulphate, Gm. 10; distilled water, Gm. 1000.

The following two formulæ for alkaline serums is given:

Schwartz's Serum.—Sodium chloride, Gm. 6; solution of caustic soda (Codex), gtt. 1-15; ["copy," but dose seems small.—Ed.] distilled water, Gm. 1000.

Calvagni's Serum.—Sodium chloride, Gm. 7.5; bicarbonate of sodium, Gm. 5.0; distilled water, Gm. 1000.

In addition to these, the author mentions a number of other popular formulas, some of which we quote:

Ringer's Solution.—Sodium chloride, Gm. 6; calcium chloride, Gm. 0.1; potassium chloride, Gm. 0.75; calcium bicarbonate, Gm. 0.1; distilled water, Gm. 1000.

Ringer's Solution (Modified by Netter).—Sodium chloride, Gm. 7; potassium chloride,

Gm. 0.30; sodium bicarbonate, Gm. 0.20; distilled water, G.m 1000.

Locke's Solution.—Sodium chloride, Gm. 6; calcium chloride, Gm. 0.26; potassium chloride, Gm. 0.4; calcium bicarbonate, Gm. 0.03; distilled water, Gm. 1000.

Howell's Solution.—Sodium chloride, Gm. 7; calcium chloride, Gm. 0.26; potassium chloride, Gm. 0.30; calcium bicarbonate, Gm. 0.2; distilled water, Gm. 1000.

BACTERIN TREATMENT OF RHEUMATOID ARTHRITIS

There are two interesting papers, on the subject named in the title, in *The Lancet* of May 17. The first, by Crowe, is a study of the bacterial flora of the urine in cases of rheumatoid arthritis. A considerable number of cases were investigated, the most striking fact being the demonstration of the presence of a staphylococcus resembling somewhat the staphylococcus pyogenus albus. This he called staphyloid coccus A. Crowe says this closely resembles, and certainly may be a member of, that group of germs called micrococcus epidermidis albus.

In 14 cases of rheumatism, this growth was found in 5; in 3 cases of neuritis, it was found in 2; and in 22 cases of rheumatoid arthritis, it was found in 14. Streptococci were also found in 8 of the cases of rheumatism; in all the cases of neuritis; and in 6 of the 22 cases of rheumatoid arthritis. On account of its possible etiologic connection with rheumatoid arthritis, Crowe prepared, and recommends, a special staphyloid bacterin.

In the succeeding paper in the same issue of the *Lancet*, Soltau gives his experience in the treatment of some cases of rheumatoid arthritis with Crowe's staphyloid bacterin. His method of treatment was as follows:

In cases showing mixed infection, that is, association of the staphyloid coccus with the streptococcus, he began treatment with a bacterin made from the secondary organism, the streptococcus. Following its administration, the joint condition was ameliorated and the patient usually experienced a sense of improved wellbeing, although in no instance was there complete arrest of the articular lesions following the use of this bacterin alone. He says that it paves the way for the use of the staphyloid bacterin, which was subsequently administered and which is followed by very marked improvement in the arthritis, amounting in some cases to apparent cure. The word "apparent" was used advisedly, because the lapse of time is yet too short to allow of any dogmatic statement as to the permanence of the cure.

In cases in which there was a single infection with the staphyloid coccus, without the streptococcus involvement, the staphyloid bacterin only was used. Soltau says that the question of dosage has been a difficult one to determine, owing to the marked reaction which sometimes follows even minute dosage, even as low as 500,000 dead bacteria. In one case the dose had to be reduced to 150,000 dead bacteria, at the beginning of treatment. Usually, however, the treatment is begun with 500,000, raising subsequent dosage by 500,000 or even less.

Even when small doses are used the reaction is sometimes severe. The characteristic symptoms are, increased intensity of the joint, pain, swelling, slight rise of temperature. The injections are usually made at weekly intervals, but each case has to be modified according to the reaction and occurrence. In one obstinate case improvement began to be manifest only when the injections were reduced to five-day intervals.

The first favorable symptom following bacterin treatment has been the reduction of nocturnal pain, so as to permit of more sleep and improvement in general health. The neuritic pains so often complained of usually have been relieved more rapidly than the articular pain, but the most noticeable feature of the treatment has been the gradual relaxation of the joint. In fact, several patients have complained that they felt weaker, this resulting from the fact that, with increased flexibility and range of movement, the atrophied muscles are not prepared to do the increased work placed upon them.

The treatment must be supplemented by gentle massage of the muscles, taking care to avoid the joint, so as to obviate autoinoculation. Joint swellings are last to disappear, but in some instances improvement has been very marked in this respect, while the glossiness of the skin so characteristic of the disease has often disappeared.

In the same number of *The Lancet*, A. E. Garrod is reported as stating, at a meeting of the Royal Society of Medicine, that the condition of chronic rheumatoid arthritis might be secondary to fecal infection in various parts of the alimentary canal. This is in line with our own experience and that of many others, and suggests the necessity—whatever other treatment may be given—of keeping the alimentary canal clean and

aseptic. This is of fundamental importance, whether bacterins are resorted to or not.

DANGEROUS ANTISEPTICS

The newspaper publicity which has been given to the Georgia banker who succumbed to renal degeneration following a poisonous dose of bichloride of mercury, taken in tablet form instead of the aspirin tablet he thought he was getting, again brings up the danger of using that powerful poison in medicine. Since Mr. Walker's death, numerous other similar occurrences have been reported. Nobody knows how many lives have been lost, because corrosive-sublimate tablets are easy to get, but the question which should interest the medical profession is, whether there are not other remedies just as safe and just as effective as antiseptics, yet, less dangerous.

There is no doubt that we do have such harmless antiseptics. Thus, for instance, surgeons have generally given up the use of mercury bichloride for sterilizing the operative field and now mainly depend upon iodine, which, though it may be irritant to the skin, certainly does not kill anybody. Another harmless substance of this kind is chinosol, which is not only more powerful than the bichloride itself, but absolutely harmless to the human host. Not only is this preparation non-poisonous, but it is nonirritant as well. Physicians certainly should be familiar with it, as well as with other harmless antiseptics.

CALCIUM SULPHIDE AS AN ANTIDOTE FOR CORRCSIVE-SUBLIMATE POISONING

Referring once more to that unfortunate Walker case of poisoning with bichloride of mercury tablets, it is interesting to note that Hayward and Allen (*Jour. A. M. A.*, May 31, 1913) recommend calcium sulphide as an antidote. While it is true that the white of egg is the general antidote, and is of value up to a certain point, these writers bring out the fact that the hydrochloric acid of the stomach increases the solubility of the mercury salt, its solubility being still further increased by the presence of the citric acid added to the ordinary antiseptic tablets. Their comment on this subject, and especially anent the use of the calcium sulphide, is of particular interest, and is in part as follows:

"Mercuric compounds are acknowledged to be toxic even in small doses; mercurous compounds can be tolerated in much larger doses; hydrogen sulphide reduces mercuric to mercurous, whether the conditions are acid or alkaline, even in the presence of citric acid, a substance which inhibits many chemical reactions. Calcium sulphide (calx sulphurata, U. S. P.), 1 Gram of which is capable of reducing 2.31 Gram of mercuric chloride, hydrogen-sulphide water, natural or artificial, which can be tolerated by the stomach, and enemas of which may be administered without serious danger, will all act in this manner, first reducing the mercuric chloride to mercurous chloride and further to mercurous sulphide. On such grounds it would seem that the sulphides are the logical antidote for mercuric poisoning."

Hayward and Allen state that there have been in Detroit two instances of poisoning by the mercury antiseptic tablets. One of the patients died; the other was given calx sulphurata and was alive when their communication was written.

This is of interest. Calcium sulphide is a drug with which every reader of CLINICAL MEDICINE must be familiar, and probably is of value in as large a range of disease-conditions as any remedy in our materia medica. Don't forget to use it in bichloride of mercury poisoning, nor, also, in whooping-cough, scarlet-fever, furuncle, and a lot of other everyday conditions.

EMETINE IN THE TREATMENT OF TUBERCULOUS HEMOPTYSIS

Flandin and Joltrain reported to the Société Médicale des Hôpitaux (*Gazette des Hôpitaux*, April 17, 1913) that they had conceived the idea of employing emetine in the hemoptysis of tuberculosis, for a long time treated by the classical authors with ipecac. Chauffard, Dopter, Rouget, and Dufour have observed the rapidity with which, under the emetine treatment, the bloody appearance of the pus was made to disappear in cases of abscess of the kidney or from dysenteric stools.

Without wishing to draw definite conclusions from a single fact, Flandin and Joltrain report their experience in the case of a man suffering from very profuse tuberculous hemorrhage from the lung, associated with high fever, which did not yield to the ordinary methods of treatment, such as ice, calcium chloride, ergotin. A single injection of 4 cgm. of emetine hydrochloride caused the temperature to fall from 40° C. (104° F.) to

37.2° C. (98.9° F.), and the hemoptysis was arrested abruptly and did not reappear.

AMEBIC DYSENTERY TREATED WITH EMETINE HYDROCHLORIDE

Dufour and Huers presented to the Société Médicale des Hôpitaux (see *Gazette des Hôpitaux*, April 17, 1913) a patient attacked with amebic dysentery contracted, in the Portuguese Indies, in November, 1911. This dysentery occurred in periodic crises every two or three months in the form of bloody and very abundant diarrhea, in the treatment of which various measures were resorted to, but with only mediocre or temporary results.

The patient was admitted to the Broussais Hospital, March 28, during one of these crises, at which time he had fever, his stools were loaded with amebæ, while the serodiagnosis was negative as to the Shiga bacillus. He was subjected to a course of subcutaneous injections of emetine hydrochloride, receiving a total of 30 cgm. (5 grains) in the first eight days. On two consecutive days he was given a small enema containing 12 cgm. of emetine, this being retained and absorbed.

When the man was admitted to the hospital, the number of his stools was about 16 in twenty-four hours. At the time of this report the patient had not more than two stools daily, and these were soft and not bloody. The improvement had been so rapid as compared with the results obtained by the treatment heretofore in vogue that the authors presented this patient as another evidence of the efficiency of the emetine treatment.

Chauffard at the same meeting also reported upon a case of a young engineer who had contracted dysentery at Salonica, and who was cured by emetine. In this report there are two especially interesting points; namely, first, an error had been made in diagnosis, the absence of ameba having led to a diagnosis of bacillary dysentery; second, the complete failure of all preceding therapeutic neasures, khosam and simaruba alone having given temporary benefit.

EMETINE IN DYSENTERIC ABSCESS OF THE LIVER

At the meeting of the Société Médicale des Hôpitaux, of March 15, 1913, Chauffard (see *Gazette des Hôpitaux*, March 18, 1913) reports another case, confirming his previous communications and proving the remarkable influence of emetine upon amebic dysentery and its complications.

As in the case reported by Flandin and Dumas, this was one of abscess of the liver which had been opened and which rapidly healed following the introduction of three doses, of 4 cgm. each, of emetine injected under the skin, and of 8 cgm. inserted in the cavity. The patient was a man, 40 years of age, attacked by dysentery in July, 1912, and having suffered from several acute attacks of amebic hepatitis. He entered the hospital exhibiting the symptoms of abscess of the liver. He was operated upon by Labey, who drained out a sterile, chocolate-colored pus, finding the amebæ in the walls of the abscess. After the emetine treatment, the discharge of pus from the wound rapidly ceased, and eleven days later the liver was completely cured.

At the same meeting Rouget cited the case of a patient who had suffered from abscess in a torpid form, without fever, since 1905. Every year the patient suffered from painful attacks, that were referred to the side of the liver. The diagnosis was doubtful for a long time, but recently, by radioscopy and by exploratory puncture, it was shown to be a case of amebic abscess. Having been informed by Chauffard of the value of emetine in such cases, Rouget, some days later, made a lumbar puncture, withdrawing 200 Cc. of pus, and introduced under the skin 8 cgm. of emetine. The improvement was extraordinarily marked and the patient now appears cured.

Chauffard, at the request of Milian for information, declared that the toxicity of emetine was, experimentally, very slight, and that in the doses employed, which seemed sufficient to bring about a cure in man, the toxicity was *nil*.

HYPODERMIC INJECTION OF IRON AND ARSENIC

Considerable interest has been manifested in this country for the last few months in the hypodermic injection of iron. Given subcutaneously, this remedy is said to cause an increase in the number of red cells and in the percentage of hemoglobin much more rapid than when the drug is administered by the buccal route.

We have had a number of inquiries as to the forms in which the drug may be used. As every reader of CLINICAL MEDICINE knows, the iron usually administered by the mouth is insoluble in water and, therefore, unsuited

for hypodermic purposes. Some of the preparations which have been employed hypodermically have proven irritant and, hence, painful, so that the selection of a proper form is a matter of considerable importance.

Gillet recommends ("Manuel Pratique de la Médication Hypodermique") the use of the following iron salts: the citrate, the ammoniocitrate, the glycerophosphate, and the arsenate; but he says that most frequently the cacodylate and the methylarsenate are employed, these two being the least painful and the most rapidly assimilated of the ferruginous preparations, while they have the advantage of combining the reconstructive properties of the iron with the hematopoietic function of arsenic.

Of the citrate or the ammoniocitrate, 1 to 3 Grams may be dissolved in 10 Cc. of distilled water. Of this solution, 1 to 2 Cc. may be given daily in intramuscular injections. Another combination consists of: glycerophosphate of iron, 0.5 Gram; glycerophosphate of sodium, 0.5 Gram; distilled water, enough to make 20 Cc. The addition of the glycerophosphate of sodium is necessary. The dose is 1 to 2 Cc. a day, administered intramuscularly.

In tuberculosis, when there is a congestive tendency or hemoptysis, the ferruginous injections must be given with care.

For chlorosis or anemia accompanied by hemorrhage, the following ferruginous "serum" has been recommended:

Ferric chloride, 0.05 to 0.055 Gm.; glycerophosphate of sodium, 4.0 Gms.; water enough to make a concentrated solution. Bring to the boiling point, then allow to cool. Now add 1 Gram of sodium bicarbonate, and mix with the following solution: Sodium chloride, 6.5 Grams; potassium chloride, 0.3 Gram; calcium chloride, 0.2 Gram; magnesium sulphate, 0.3 Gram; glucose, 1 Gram; oxygen, to saturation; water, 1000 Cc.

Of this solution, 500 Cc. is given at a single injection. It should be sterilized in an autoclave before administration.

As already stated, the author particularly recommends the cacodylate and the methylarsenate of iron. The first is given in the following combination: Cacodylate of iron, 0.3 Grams; distilled water, 10 Cc. Of this solution, 1 Cc. contains 3 cgm. of the active drug and may be employed as a single dose.

Methylarsenate of iron is given in the following form: Methylarsenate of iron, 0.2 Gram; methylarsenate of sodium, 0.2 Gram; distilled water, 10 Cc. The addition of the methylarsenate of sodium is necessary.

These preparations should be injected every day for eight to ten days in succession, and may be resumed after eight days of rest. By never exceeding a certain dose and by interrupting the medication from time to time, the danger of intoxication need not be feared, and the dosage may be gradually increased. For arsenic action alone, the author recommends cacodylate or methylarsenate of sodium solution, from 3 to 5 percent, in distilled water. This may be given in the same manner as the cacodylate or the methylarsenate of iron.

These salts are recommended in anemia, convalescence, and all chronic affections characterized by progressive loss of strength and weight.

NOTE.—In the French book, from which this article is abstracted, the "*green* citrate" of iron is recommended. So far as we are able to ascertain, there is no green citrate. The citrate of iron (which is official in this country) forms thin, transparent, garnet-red scales, which are slowly soluble in tepid water—considerably less soluble than iron and ammonium citrate. However, ferric citrate and sodium phosphate dissolved in water and evaporated to dryness yield light-*green* scales which are readily soluble. The resultant consists of phosphate of iron with sodium citrate. Possibly this is the "green citrate of iron" referred to by our French *confrère*.

DISINFECTION OF SKIN WITH ALCOHOL

Last year (September, p. 933) we gave the deductions arrived at by Beyer on the value of plain alcohol for preparing the field for surgical operation. Now Z. Ozaki (*Deutsch. Zeitsch. f. Chir.*, through *Zentralbl. f. d. Ges. Gynaekol.*, 1913, p. 113) confirms the claim that the best strength of alcohol to employ is that of between 60 and 80 percent. However, Ozaki finds that the bactericidal action of the alcohol is greatly lessened—almost worthless—if the skin has not first been washed (briefly) with a warm soap solution—and this is claimed to be far superior to a preceding prolonged scouring with brush and hot water. Besides destroying the bacteria, the alcohol serves to harden the epidermis.

MISCELLANEOUS ARTICLES

Quinine and Urea Hydrochloride in the Treatment of Alcoholism

ALCOHOLISM is a protean disease, the "exceptions" almost the sole constant feature of its "rules." If one states that alcohol causes the face to flush, or that it produces neuritis, he meets an equally true, but wholly contradictory, viewpoint, which may be summed up by the words "not always."

The craving for renewed stimulation felt by the drinker may be a cry from the nervous system, still, its outward manifestation is characterized by a demand from the alimentary canal. As an evidence of this may be considered the substitutive service of mixtures containing capsicum, ginger, nux vomica, gentian or other bitter or pungent remedies. In the matter of alcoholic beverages, particularly the ardent spirits, there is contradiction even as to pleasurable taste, for many confirmed drunkards actually abhor the taste of whisky or brandy. In short, I think that, if one wished to preach a temperance-sermon upon alcohol and the devil, he might well choose as a text the words of Goethe's Mephistopheles, "I am the power that denies."

My patients are women, some of whom have become addicted because of painful menstruation and the relief afforded by hot drinks containing some distilled liquor. Relief and repetition fix a habit; yet, all the time the first and natural repulsion remains. A woman may be anxious to work out her own salvation, may aid her physician to the best of her ability, but, if the doctor incautiously should remark or convey the impression that "she loves liquor," then she no longer has respect for his opinion and his day of good influence is past. For, this one thing that woman does know—she does *not* love liquor. A woman of good instincts hates the thing that degrades her, even when using it and abusing its use.

All medical writers direct their therapeutic weapons at the gastrointestinal tract, as if that tract began at the stomach, completely ignoring the self-evident fact that the gateway is opened or shut by the lips. Therefore, while the sensation of "sinking at the pit of the stomach" is well known, no one so far as I know has described any symptoms manifested by or about the mouth and lips.

Discard the questions about taste and tasting-good from all calculations. They have little to do with the matter of craving. Patients of mine have drunk soap liniment when they could not obtain liquor. A real toper will shudder at the taste of whisky, but after the dram has gone out of his mouth and into his stomach he will smack his lips, utter a resounding "Ah" of satisfaction, and his whole appearance changes. He is rejuvenated by "the dog that bit him." While it is in his mouth, and briefly waiting at the bar of taste, the whisky makes him shiver; but when once it is beyond palate and taste and is gratefully warming up his stomach he feels "fine as silk"—at least for a time—and amply repaid for the struggle which he calls "downing it."

My studies of the craving for the stimulant lead me to think that a common and first outward manifestation is a slight tremor or uneasiness about the mouth, being evidenced by wiping the lips with the back of the hand or with a handkerchief; and should an alcoholic put his hand or finger to the mouth, it is a danger-signal, vigilance must be doubled, and all extra precautions be at once established. This movement is preliminary to an impending mad desire for alcohol.

The patients say that these peculiar sensations about the lips will not stop until the demand for alcohol is satisfied; then the lips feel like the foot when it is "going to sleep," and —"All is well" (sic!). At first, I was unable to understand what this feeling was like. It has nothing to do with any local effect from whisky. Painting the patient's lips with whisky and not allowing any

to run down his mouth and into the stomach was torture and would sometimes intensify the tremor. Then I myself swallowed one ounce of rye whisky diluted with plain water, and repeated this dose every ten minutes, until I got the sensation after the fifth dose.

This sensation can hardly be termed formication; but that, combined with a slight hesitancy in coordination, is what it most resembled. I take it to be the prodromal stage of stammering, plus a mild vasomotor dilatation. This feeling may be closely imitated, upon the inner surfaces of the lips, that is, by placing a half or a full grain of quinine and urea hydrochloride upon the patient's tongue and allowing it to dissolve. Repeat the process every half hour or as often as required to get the effect. The bitterness of the medicine is an advantage, but its distinct value lies in its simulation of the beginning of incoordination, the symptom which the patient experiences after a good, big drink.

One of the most valued standbys of the neurologist is what is known as "sidetracking." The use of the hydrochloride, as aforesaid, is a sort of "sidetracking." It gives the patient a desired sensation, it does not give him alcohol, and it changes the current of his thoughts.

Douglas H. Stewart.

128 West 86th Street,
New York, N. Y.

MEMBRANOUS CROUP: BIG DOSAGE OF DIPHTHERIA ANTITOXIN

There may not be anything remarkable in this case, but while the patient was in my charge, I thought it would be remarkable if she recovered. It was on March 9 when I was called to see this patient, a woman 35 years of age. I found her sitting up in a chair, rather embarrassed for breath and suffering from what looked like ordinary croup (at any rate that is what I diagnosed), and immediately I got busy with iodized calcium. After two days of this and other treatment, we did not get the expected results, but—whisper it—the patient began coughing up some portions of membrane. Then, by dad! I took a "tumble," and when I landed on my feet again I was pumping antitoxin into my patient, and kept this up until I was almost ashamed to look my patient in the face; and by the time I quit using the "juice" the serum-makers had declared an extra dividend. For four days I was on the job with a loaded antitoxin-syringe in one hand and calcidin in the other and fear in my heart; then things began to loosen up a little.

I took a long breath and began to survey the landscape. I found about seventeen different punctures in seventeen different places. Well, they did not worry us any, for my patient was improving; but those punctures reminded me of a case of rheumatism I had under my care some years ago back in Ohio. When I called upon that patient, I found him sitting up in a chair. The next day he was in bed and feeling pretty tough. I asked him how he felt. He was a slow-talking man, but I finally got out that there was a change of some kind taking place. I could hardly keep my face straight, but managed to ask him how many times his bowels had moved. "Seventeen times!" he answered. Well, I had to explode then.

But to get back to the diphtheria case. Things kept on loosening up, my patient was improving, and I stopped the antitoxin; however, I continued with the iodized calcium. Then I began to count the cost, and found that we had used 53,000 units. I do not know that we broke any records—we were not after any record—but, thinking the matter over later, I remembered how some "pirate," back in little old New York, some years ago had used 90,000 units in a child sick with diphtheria. So, I guess, we shall have to hand it to him. But I fancy we were going some, at that.

As I said in the beginning, I do not know that this case is so very remarkable, still—listen. On April 6 I was again called to see this lady, and when I left her this time she was the proud mother of a 9½-pound boy. That is going some, too; eh?

W. B. Secrest.

Franklin, Idaho.

[We are all of us under obligations to Dr. Secrest for reporting this case, for we *should* emphasize the necessity of giving these big doses of antitoxin sometimes. In the majority of cases, it is true, from 5000 to 10,000 units are enough, but in the very severe cases, especially of the laryngeal type, when a primary dose of 10,000 units does not produce the desired and expected improvement, then the physician should stop "sending a boy to mill." Give the antitoxin with a bold hand—fearlessly, in "dose enough." Don't fractionate your dosage too much; Park has shown that best results are obtained when the antibodies are introduced in large enough quantities to combine with

whatever toxins may be present—not with a small part of them merely. Don't be afraid of the large dosage. Hill, in "International Clinics," says: "Even in the administration of extremely large doses to children under five years of age, I have noted no ill-effects which could be attributed to antitoxin, and so far have had no deaths from this disease."

Doses of 50,000 units are not uncommon; indeed they are generally recommended in the very severe types. State Commissioner Dixon, of Pennsylvania, records dosages of 53,000, 57,000, 63,000, 68,000, and 117,000 units. Schorer, in his "Vaccine and Serum Therapy," says that "when the disease comes under observation late or is very severe, 20,000 to 100,000 units may be necessary. . . . . The age of the patient, unless very young, should have no influence upon the amount of antitoxin injected." Schorer also says that streptococci are very important and are responsible for many of the fatal cases of diphtheria. Such cases should receive both diphtheria antitoxin and anti-streptococcus serum. This illustrates, in another way, the value of the laboratory aids to diagnosis, which should be neglected in no case.

While we all know the essential importance of the biologic treatment, I fear that many of us lose sight of the necessity for using indicated drugs. Dr. Secrest was absolutely right in persisting in the use of the iodized calcium, and calcium sulphide, intestinal eliminants, local antiseptics for the throat and nose, and suitable drugs for the maintenance of the integrity of the heart and kidneys are all of vital importance. The doctor should watch his patient "like a hawk" and be prepared for any emergency. I know that many deaths from diphtheria are due to the fact that so many physicians consider antitoxin a specific, and therefore neglect everything else.—Ed.]

DILATATION OF THE PREPUCE

I have received a large number of letters from doctors inquiring for details about dilating the prepuce in place of circumcism, as set forth in my article in the April number of this journal, which, with your permission, I will answer all collectively in this place.

It seems that the human animal is defective in its sexual organs, and that very little progress in managing these troubles has been made since the time Moses laid down those wonderful sanitary regulations. In all other animals the young are capable of taking care of themselves as soon as they are born, and they look after and clean their own sexual organs. On the other hand, the human, at birth, is entirely dependent upon the parents for everything, and the latter, through a false sense of modesty, shun touching the child's sexual organs, taking care of and cleaning every part of the male babe except its penis. That organ is left to itself—and what a lot of misery this ignorant neglect is causing. The defect, therefore, is more apparent than real.

The foreskin of every newborn male child should be retracted, forcibly, by the accoucheur, at the babe's first dressing, and the nurse or mother be instructed to do the same thing every day, cleaning and oiling the organ before returning the prepuce. If this is done, and carried out for two or three weeks, the child will have a perfectly normal penis, and the foreskin will be loose and retract easily afterward. Where the foreskin can not be retracted without using considerable force, then dilate it with a small long-jawed artery forceps.

Let me impress on your minds this fact, that systematic care of the little fellow's organ from birth will do away entirely with the necessity of anything so barbarous and brutal as Mosaic circumcision.

In older childern that come to you with the defect fixed, through neglect, dilate in the same way, using a larger forceps, according to conditions. Do the dilating gradually. If the child is old enough, instruct it to retract the foreskin and gently clean the glans with soft gauze and warm soapsuds every day. The continued retractions will dilate the foreskin so that it will soon become normal. In the few instances where the foreskin is fibrous and will not dilate, slit it open on the upper aspect. But it is not necessary to carry the cut clear back to the corona; cut only as far back as the narrowed part goes, usually about half the depth of the glans being far enough to allow the foreskin to be retracted easily. W. A. Marner.

Miles, Ia.

MORE PRAISE. ACTIVE-PRINCIPLE "BOOST"

When I just had been graduated it appeared to me that our journals were too full of articles from the pens of men upon whom the sobriquet of "Doc" weighed so heavily that they felt constrained to air their vast knowledge for the benefit of more modest, though, perhaps, more brilliant men. Grow-

ing older, it did not seem to occur to me that I myself might have had an experience or had found something that my confrères might like to know of. I continued to scan that and this journal as it came to hand, now and then finding scattered among the juvenile efforts a gem from one of the masters.

Then there came a time when a little pamphlet would, at intervals, find its way to my desk, and I found myself actually *reading it all the way through.* It had the size and appearance externally of a medical journal that might have been plucked green, but on the inside of its covers it seemed to be quite ripe, indeed. This literary product was called THE ALKALOIDAL CLINIC. Then for a space I missed it and wondered what had become of it—"what had gone with it," in the Southerners' idiom. And then it dawned upon me that in CLINICAL MEDICINE I beheld the full-fledged debutante who was my little girl acquaintance of the yesterday.

Now, frankly, Doctor Abbott, an article from my pen does seem out of place in your journal among the kind that usually appear in its pages. I have often wondered how so many of those articles flowed so smoothly as to remind one of the placid streams revealing their depth by their very placidity. I hope you can keep it so, either by discrimination, or by a little regeneration, as it were, between the pen and the printers' type.

In whatever way it happens, though, the CLINIC'S doctrine of the active principles rings true, and it cannot be impressed upon the members of our profession too strongly and too persistently. Just hammer away at it!

And now I am going to give you a comparison that will illustrate the difference between crude medicine and the alkaloids—an experience in my personal practice.

Some years ago I found a condition in the country something like this: An infant, maybe six or eight or ten miles away, would be taken with high fever and convulsions. Its parents would start a messenger on a mule to summon a doctor. The mule would amble off in the characteristic half-hammered way, while the distracted parents wondered whether the slow beast would ever get there; and whether the doctor were home; and if so whether he would ever get to the patient; or whether the sick child could live till the doctor came; or whether the doctor might not be sick and too "weak" to come.

That is crude medicine, perhaps inert.

Then I had constructed about 25 miles of rural telephone lines of my own, the first put up by a physician in my section (or in any section that I know of) and installed phones at short intervals.

Now suppose a case similar to the one recounted. The father now steps to the telephone and rings.

"Hello! Is that Doctor Young?"

"Yes, this is the doctor."

"Well, doctor, please come as quickly as you can; I am afraid my baby may not be living when you get here."

"All right, I shall be off at once." (Or perhaps the "Better-half" was on duty, and, knowing at any hour just where to locate me, possibly could pick me up on the road, sometimes nearby the house of the sick infant.)

What relief! They know now he is not too "weak" to come, in fact, they know he is coming, and in one-third the time at least; and they just hang up the receiver and walk to the front door and say "Now watch him come." *That is your active principle.*

We can give our crude drugs and then hope that the result will come. And sometimes it does come, but sometimes it does not, because the drug is inert.

But we can give the alkaloids and *know* the physical effect will follow, provided vitality is not too far gone.

So, if there are any on my enclosed list of doctors' names who are still using the mule-method, just fire a sample copy at them, and make "live wires" of them.

E. B. YOUNG.

Baker, La.

[When we get a beautiful letter like this we can rarely resist the temptation to print it—not altogether because the kindly praise has tightened our hat band, but rather because we hope the experience of one thoughtful physician may stimulate others. to "think on these things." We have sent copies of CLINICAL MEDICINE to the list supplied by Dr. Young—and, by the way, why won't other readers help stimulate interest in *our* journal by sending us similar lists and speaking and writing about the CLINIC to their medical friends.—ED.]

COMMENTS ON DR. FRENCH'S ARTICLE: PNEUMONIA

Already I have read my May number of CLINICAL MEDICINE and have found it full of interesting and useful articles.

The article which caused me the most thought was that by Dr. J. M. French (p. 409) on the "Active-Principle Treatment of Pneu-

monia." I agree fully with Doctor French as to the value of good remedies in the treatment of pneumonia, but wish to offer a few reflections and criticisms.

Three things to be considered in the treatment are named by him, namely: the first is summed up in the word individualization; the second is, special symptomatology; and the third, the selection of the indicated remedies, instead of routine remedies for the diagnosed affection, i. e., giving purely empirically chosen remedies, as our predecessors were wont to use.

Now, that sounds like the teachings of a Homeopath, does it not? If it is, it is just as good, and, if Homeopathy taught it to us, let us give that school credit for so much. You will pardon me if now I jump to the question of treatment. Under this head Dr. French writes as follows:

"There is one other active principle which I have learned to use in those cases of pneumonia which are complicated with pleurisy, as shown by a sharp 'catching' pain in one or the other side when breathing, This is bryonin, a glucoside derived from bryonia alba, a remedy of which you probably know very little. It is a remedy for serous membranes, and is especially indicated in pneumonia when there is felt a sharp, cutting or stabbing pain in the side, made worse by motion."

But, why doesn't Dr. French give the Homeopathists credit for bryonia? The symptoms mentioned by him will, every one, be produced in the healthy individual if bryonia is taken in physiological doses; however, physiological doses of the drug will *not* cure those symptoms, but given in smaller dosage, not necessarily the homeopathic C. M. will do so. He does not state the dosage he employs, but quite likely it is the 1-64 grain standard granule—not an immense dose, but enough.

I sincerely recommend its use by all physicians, and am sure it will prove the friend in need. Do not pass it by because it is a sheet-anchor of Homeopathy, but rather make it your own anchor to be relied upon should it prove itself strong enough upon honest trial.

I believe, too, that the heart and nervous system should be guarded from the start of the disease, just as aconite should be given to guard the pericardium in rheumatic fever. (Ever heard of it?) This reminds me of a great inconsistency in the practice of the average Homeopath. These men will decry the use of stimulants as protection in pneumonia, yet they recommend aconite as a routine to guard the heart in rheumatic fever.

Now, there is only one more point I wish to make. Pneumonia is an acknowledged germ-disease. We all are "threatened with pneumonia." Then, why will the physician tell the "family" that the patient was "threatened with pneumonia," when he has really aborted pneumonia by prompt treatment?

Wm. Rae Young.

Shelbyville, (R. F. D. 1) Mich.

[Thank you, Doctor, for these suggestions. We owe many things to the Eclectics and Homeopaths, and we are all willing to give them proper credit I am sure. The real physician cares little about the source of his drug; what interests him most is its value in treating his patients. Bryonin is a valuable remedy and should be used much more than it is in pneumonia, pleurisy or whenever there are sharp, cutting pains in the side, made worse by motion.—Ed.]

ARE YOU GOING TO GETTYSBURG?

Doubtless among the readers of Clinical Medicine there are a good many veterans of the Civil War who will go to Gettysburg to attend the reunion of the veterans of that great battle, to be held from June 28 to July 10. We want to urge any of those who may be present to make the acquaintance of our friend and coworker, Dr. Richard Slee, of the Slee Laboratories. Dr. Slee is a lieutenant in the Medical Reserve Corps of the United States Army and has been ordered to active service at the Provisional Field Hospital, in Gettysburg, during the reunion. He will be glad to see any of our friends, old or new.

BATHS IN FEVERS

It was a surprise to me to read an article, in an old number of Clinical Medicine, from the point of "clean up, keep clean" practice. Baths in fevers! I strenuously object to anything bringing discomfort to a patient when there is the congenial warm epsom sponge-bath, so refreshing to all fever patients, who will exclaim, "How good I feel." You don't hear that when the cold bath is given. It is a terror to all who have to submit to it. I have a letter from my granddaughter, in Denver, who was treated for about two months with cold baths for typhoid, in which she writes that she had a very kind doctor who did not give nasty medicines to take, "but, oh, the cold baths"! If properly

treated she should have been well in a week, and without these chilly baths.

As to intestinal hemorrhage, we don't have it in properly treated cases. In the latter part of that article you say that these baths are rarely necessary. I say *never*.

In regard to the bowels, it is never safe to take a patient's word about good condition. I have just treated a case where the patient insisted the bowels were right. The tongue was very slightly coated. After two days' treating with aconitine, veratrine, and intestinal antiseptics, and still the temperature going to 103.8° F., I decided to do something at night, so gave 7 anticonstipation granules and a warm epsom sponge-bath, followed in the morning by saline laxative internally. By 9 a. m. there was a copious black fecal discharge, enough to cause fever every time. Then I gave an epsom-salt enema, which made house-cleaning complete. Result, no more fever. This should have been done at first, and would have saved two days of fever.

There is plenty of good, practical, common sense to put in your journal without even alluding to cold baths, only to say "don't." They are uncongenial and unnecessary.

GEO. ROBERTS.

Lincoln, Va.

[It seems to me Dr. Roberts is just a trifle too emphatic in his objection to cold baths, especially in typhoid fever. In rugged patients, who react well, the results from the Brand treatment are certainly excellent; but the baths must be given right, by trained nurses, with friction, and with proper facilities, such as are rarely obtainable in the patient's home. The general practitioner will usually get best results from sponge-baths, and the epsom-salt rub advocated by Dr. Roberts is certainly very refreshing, while the medication suggested, particularly the "clean out," is mighty good. Our apologies to Dr. Roberts for the delay in printing his letter.

ED.]

TWO UNUSUAL SURGICAL CASES—RECTAL TEAR IN A MAN, PERINEAL TRAUMATISM IN A WOMAN

As the report of remarkable cases is always welcomed by your valuable journal (one of, if not the most valuable one, published for the profession as a whole), for the interest of its readers I take pleasure in writing you of the two interesting cases from my practice.

In July, 1902, I was called in consultation to see a young farmer, 20 years old, robust, well built, and who always had been healthy. The following information was given:

After a shower of rain the man got on his pony, bare back, put his shovel over his shoulder and rode off to field to open up the ditches. Getting to his destination, he pitched his spade-like shovel, as is usual, down to the side of his horse, the blade sticking in the ground and the handle standing upright. This act made the horse shy and it reared, throwing off the rider, who landed, in a sitting posture, on the top end of the upright handle of the shovel. The handle, passing through the clothes, entered his anus, went straight up the rectum to the sigmoid, and there pierced the gut, making an opening large enough to admit two fingers easily, and entered the abdominal cavity, just how far we do not know, but from the appearance of the shovel-handle it was at least twelve inches beyond the anus. There was no traumatism where the handle entered the anus and but very little hemorrhage from the wound.

Had I seen the victim immediately after the accident, I should have urged laparotomy; but I was called five hours after it happened.

I found the patient with an anxious face, jaundiced, hiccoughing, cold perspiration, rapid pulse, temperature of 101° F., very tympanitic, and suffering severe pain; general peritonitis was marked. Operation and moving the patient (five miles in the country) being out of the question, I used the morphine splint, giving two doses of morphine, of 1-4 grain each, hypodermatically, within one hour. Then I made a digital examination, finding the condition as described. I advised quiet, horizontal position, liquid diet, catheterization, and the free use of morphine to control pain.

The patient did splendidly for twelve hours, then began suffering, the doctor in charge having failed to repeat the morphine. I was called again thirty-six hours later and found everything as at my first visit, if not worse. I advised the same line of treatment as on my first visit, this time the morphine being continued as suggested. Today that man, seemingly hopeless at the time, the victim of violent traumatic peritonitis and large bowel perforation, is alive and in perfect health. Nothing unusual occurred during convalescence.

The other case is of more interest, I think. It is that of a stout and healthy young Frenchman of 32 years who had just married a young woman of French descent but born in Louisiana, 24 years of age, of medium size,

and healthy. About 4 o'clock, a. m., the night of the wedding, I was called to come hurriedly to see the bride, the husband saying he had "busted" the hymen and that she was bleeding to death. When, after a drive of three miles, I got there, I found the woman in a state of shock, the bed saturated with blood.

Examination revealed a wound midway between the anus and vagina, ragged, and large enough to admit two fingers and opening into the vagina after going through the perineum. The wound was of such a nature that I had to pack and drain. Recovery was uneventful, and the patient is now the mother of five or six children.

I questioned the husband, and he assured me he had done it with his penis, which, by the way, was unusually large—but I do not believe it was capable of making such a wound through the natural skin; I do not believe he could even gouge it with his fingers. His wife says she noticed nothing and thought she was going through the natural course of events. This last case occurred about two years ago.

F. F. Young.

Covington, La.

MEXICAN PEOPLE AND MEXICAN PROBLEMS

[*Continued from Page 534, June Issue.*]

All people not fully civilized admire force. The strongest, the bravest, the most brutal among them is destined to be their chief, to rule and to lead them. Justice, while innate in all human beings, is as yet only embryonic; and without shape in their consciences, its form is too vague to be understood or find an expression. Might to them is everything, and, under the eternal law of the survival of the fittest, the weak are trampled under. And the weak, not being satisfied with the ruthless methods of his stronger brother, makes use of duplicity and craftiness as weapons of self-defense, and later on uses them as arms of offense as well, as ambition grows within him. And here we have the first expression of "diplomacy."

The inheritance of this elemental trait has not been extirpated, and perhaps never will be, as even the biggest nations in their dealings with their neighbors have recourse to duplicity, and, if the neighbor be weak, might instead of right is the means to persuade them that the wishes of the strongest are to be considered.

And the Mexicans, in their evolution toward civilization, are no exemption to this fundamental law. They want the strongest among them to rule them—men that are ruthless and unscrupulous and at the same time just. Such a man was Porfirio Diaz. Diaz knew his people, and he knew how to handle them. More, he knew when it was time for a man to die; and by means of the timely disappearance of a few he saved uncounted thousands from being slaughtered, and at the same time made his country prosperous and respected.

What will you? The people living in constant strife and bloodshed for more than sixty years had forgotten the art of peace. Perhaps, too, a lawless existence of two generations, and more, gave birth to new—or, rather, old—ideals of happiness, and man went back to savagery. And now, once more, today, as yesterday, the average Mexican is never more happy than when astride a good horse, under him a silver-mounted and gaudy-strapped saddle, and equipped with a good rifle, a keen machete, a pack of cards, and a bottle well filled with aguardiente. Fields and woods furnish an abundance of wild game and fruits, so why not be lazy? Of a vivid imagination, he is exceedingly romantic; and romance combined with laziness conduce, naturally, to outlawry.

Remember, these warfaring people are the sons of the chivalrous Spaniards, and, together with their virtues, they have inherited the vices of the conquistadores. But, they are also descendants of the different tribes of aborigines that peopled Mexico at the time of conquest, some of them wild and free, tilling the ground or roaming the hills and mountains as hunters and nomads; some of them the most abject of slaves to a brutal and bloody religion and a proud and domineering aristocracy. And all these various and distinct races left their multiple traits on the character of their descendants.

In the presence of so many different contending aspirations, of so many different languages even, of ideals antagonistic to each other, what single governmental constitution could be formulated that would fit the needs of Mexico with its overwhelming percentage of ignorant citizenry, people who are easily swayed by the ambitious, half-educated would-be leaders constantly arising from among their own ranks and caste.

And right here is one of the troubles not understood by outsiders. I have traveled all over Mexico during the last twenty-five years, have sojourned to a greater or less ex-

tent in most of the states, and have assimilated myself with the people, have taken part in their pleasures and rejoicings and have been one with them in their sorrows; I speak their language well enough to be mistaken many a time for a real Mexican; I understand their faults and appreciate their virtues—but let me tell you, the people of this country are divided among themselves by different sentiments and ideals just as much as are the Greeks, the Turks, the Slavs, and the Teutonic and Latin races of Europe.

Such is the Mexican of today, a complex character, not easily understood. He is like a boy who would like to be trusting, but who, on account of former mistakes, has become exceedingly suspicious and by his own mistrust is led himself to do the very wrong from which he is trying to escape. Generous to the extreme, his purse is always open to a friend; and a graphic way to express his desire to serve and be hospitable to a stranger, is, to say to him, "My house is yours." They can be very grateful, indeed, and, as a rule, for instance, the doctor is well paid if he understands his business—sometimes I used to get from a grateful patient, in addition to my fee, a fine horse and saddle, or some other valuable token of esteem. But, also, they can be terribly ungrateful, the very essence of churlishness and base ingratitude.

Extremely unreliable, though, as they are, it is sometimes a hard matter to enter into business transactions with them, for whenever the Mexican thinks it profits him so to do he will go back on his sacred word. Yet, their fathers before them used to be proud of keeping their promises, and they had an old custom according to which a man would pull out a hair of his beard as a pledge of faithfulness.

The lower class, which all over the world is the backbone of a nation, the producers of the necessities of life and the wealth of the people, in Mexico are the greatest hindrance to her progress. No matter where they are born or to what race they belong, in one thing they are of one mind—they shirk work. There is nothing that the Mexican is as afraid of as work. As formerly these people were peons, that is, men who virtually had sold themselves for money borrowed in exchange for work, the custom prevailed for a long time to loan them money for work to be done. But as eventually the laborers discovered that, under the law, they could not be forced to pay, they would borrow money and refuse to pay it back. Then wages were raised; but, nevertheless, the peon does not work. Quite recently, an instance came to my notice which will illustrate the labor-question to a T.

A master carpenter hired an "oficial" [journeyman artisan] to work for him. This man demanded $1.50 a day and was hired at that wage. He was directed to make a bunch of ax-handles, which are sold at 25 cents at retail. He turned out three as a day's work, and demanded his full day's wage of $1.50. This man, who used to earn 25 cents a day, though he demands better wages, in no way has increased his capacity to earn the pay.

To explain the people more fully, I will refer to one instance of the rule of the strong hand. In the Huasteca Potosina, a beautifully rich country, there is a town named Huehuetlan, the poorest favored by nature, yet, the best-built town in the whole Huasteca. There lives an old man by the name of Saloman Morales, to whom the town owes its prosperity. He was a poor man, belonging to the peon class, a Mestizo with perhaps more of the Indian than white blood in his veins. A hard worker, he slowly rose in his community, until, becoming owner of most of the lands around the town, he became its cacique (chief or arbiter). And he certainly ruled with an iron hand. He would not allow drunkards or gamblers in the community—they either had to work or leave. It was but natural that the man should meet a great deal of opposition, but his enemies never lived long enough to do him harm. It would happen that a man was killed in a brawl. Some other time a man was robbed and murdered on the highway; still another was killed by unknown persons—for revenge, it was rumored; then, again, someone's body decomposing was found hanging from the limb of a tree; and so the story went on. Altogether, good Don Salomon has confessed to twenty-seven murders; not, indeed, committed by himself, but through his agencies. The following narrative will illustrate the man as he really was.

One day, when grinding sugar-cane, the wife of one of his peons brought the dinner to her husband. She carried her little baby with her, and its crying annoyed Don Salomon, who, with violent language, ordered its mother to stop the crying of the brat. Her efforts being unavailing, Don Salomon, in a rage, tore the babe out of her arms and threw it into the evaporating-kettle full of boiling molasses. About twenty men, friends and companions of the father, were present at the deed, and not one uttered a word in protest or opposition.

You and I, we all loathe a brute such as this. But what must be your feeling toward the people who allowed this monster to commit such a heinous crime without punishing him on the spot? Don Salomon himself is an arrant coward, he will go to sleep at night, ostentatiously, in his costly brass bed, but as soon as it grows dark he will disappear, no one knows where to. And such a being made that town prosperous! But the people are not grateful for their prosperity, for they hate and fear him. What kind of people are they that will not be decent even for their own good unless forced to be so by such barbarous means?

Around Huehuetlan, the poorest part of the Huasteca, you find rich cornfields and fruit- and coffee-plantations, because the people were made to work. In all the rest of the Huasteca, which is perhaps one of the richest districts in the country, the owners of the land had to content themselves with sowing grass and thus spoil their lands forever, for that grass can never be eradicated. And this, just because the native people do not want to work. Lands that can easily be made to produce from $500 and upward, a year, per acre, in this manner yields only from $20.00 to $25.00—and the people are satisfied to live in misery and poverty, if only they do not have to work. They will steal, though, from their neighbors who do work, nor do they resent or think it a dishonor to be called thieves.

Here is another phase of the character of the noble Mexican people. Some years ago there lived in the City of Mexico a German, a machinist and director of some flour-mills or something of the sort. He had a very nice family, one of them a little girl, twelve years old. The father had been sent to Germany by his Company to make a study of some new kind of machinery they desired to install in their mills. As children will, the girl was greatly taken by the glitter and spangle of the bullfighters; and Gaona, just then the latest hero of the bullring, seemed to her the greatest man on earth, although she had never seen him.

Friends of the bullfighter, knowing the child's predilection, one day took advantage of the fact that her father was absent and her mother in the hospital down with typhoid fever, to inveigle her to see a dance given in honor to the hero Gaona. What happened afterwards is not definitely known, but the girl committed suicide the next day. The autopsy proved that she had been raped, and from what was allowed to get out it appears that she was drugged, dragged to some low hotel and kept there all night by the bullfighter.

Only one friend did the dead girl have, a newspaper, the *Imparcial*, published in Mexico. This paper, investigating the case on its own account, compelled the authorities to take an active interest in it; but when the paper was about to close its investigations, with evidence sufficient to convict the man, its offices were stormed by a mob, and the personnel barely escaped being lynched.

Gaona went free, borne out of jail on the shoulders of his admirers. As the little girl's father, though not present, was alive, it was considered that the uncle was not legally qualified to represent her; and when her father did come, he had to prove that he was her father. And by the time the birth-certificates arrived from Saint Louis, Missouri, the legal time was up and the case was thrown out of court. The mother of the little victim, being convalescent, died from the shock when she learned of her little girl's suicide, and so she, too, was unable to represent her. And the result is, on one side a ruined family and sorrowing, lonely father, on the other, a glorified bullfighter with more honors than ever for that deed.

So much for the moral sentiments of Mexicans, which finds ample expression in the rapes committed by rebels on women and on girls of all ages, from eight years up. Rebels even will ask the authorities of the town they menace for girls and young women, without awakening the indignation of the pacific inhabitants of the country unless they be foreigners.

The last few years have abundantly illustrated the fact that there are no notions of morality nor of patriotism. It is true, Mexican papers tell us of how Mexicans will rise as one man against the invaders in case there should be intervention from the north, but they fail to explain why they have not done so in the protection of women and children or to remove all cause for intervention, which really and truly would be patriotic.

It is my opinion that there are more Mexicans who desire intervention than who do not. There are thousands who would like to resume work, and do not care a straw how peace be secured, so long as there be peace. Little do they care for who is president, so long as they have liberty to work. The socalled agrarian question does not bother them, since, after all, that is only a bait. Anyone with sense knows that it is impossible to despoil legitimate owners of

lands for the purpose of dividing them among the poor. That was the promise of Madero, and it is the bait held out now by Vasquez Gomez. President Juarez once distributed public lands to the poor in the state of Oaxaca, with the result that the land was immediately sold for almost nothing, as the new owners were too shiftless to work without the whip.

The great landowners, with few exceptions, are legitimate owners of their properties, as in most instances they bought the lands from towns and villages some thirty or forty years ago. In most instances the people voted and put in as local authorities the men whom the rich landowners wanted, the voters being bribed with a bottle of brandy or a very few dollars; and these authorities sold the lands cheap, but with all requisites of legality, and the indolent and shiftless populace never lifted a voice against these sales. They did not care to work them themselves, and they felt flattered because the rich man or his administrator took notice of them.

Now they were being paid good wages and apparently were satisfied, when Francisco Madero told them that they, by rights, should be the great men and the owners of the soil. Besides, it was wrong for them to pay taxes; that was a robbery of the Porfirio Diaz government and would be abolished when he, Madero, should take the chair. And, preaching anarchy, Madero became president, and the Porfirian edifice, which it took three decades to build, was razed to the ground in less than two years. But no other structure was erected in its place. Any brute or silliest fool can destroy another's work, as has happened here—but to build something better, that is another thing.

Madero is gone, but the work of destruction started by him will not stop yet for a long while. It is entirely too easy for a poor man, if he only be smart, to become a general and retire with lots of money. Then some of the very rich and influential have interest at stake, money to make, ambitions to satisfy. And many of the men now in arms against the Federal Government are personal enemies to the men in power, owing to abuses and atrocities committed by the soldiers during the late campaigns. Murdered relatives, raped women, burned homes, all cry for vengeance; for the soldiers have committed the same crimes that Zapatistas and the other brands of rebels did commit. And as long as the military are in power, those that have personal grudges against them will be in the field, and there are always ambitious men like the Vasquez Gomez brothers who will fan the flame.

Under such conditions, a legal government is impossible. And Mexico has not had a legal government since the sixties, when Benito Juarez reelected himself to the presidency. Lerdo was not the legitimate president, neither was Porfirio Diaz legitimate. Madero became the legitimate president through illegitimate means. Huerta became president through a coup, and I doubt very much that the next president will be legitimately elected. It is the law of the strongest to get the seat, and if he is ruthless and unscrupulous enough he may hold it.

But, if capital has sufficient protection and sway, then peace will be assured. Only capital which loses through revolutions, only capital which encourages work, capital which is munificent to reward peaceful efforts to progress, only capital can save this country from anarchy and complete ruin. But not the capital which foments revolutions, not the capital which grows and fattens on widows' tears and starving-orphans' cries. No, we do not want that kind of capital to come here.

Let capital come here to work the mines, to till the soil, erect saw-mills, harness the waterpowers to move electric plants, and induce the government that may exist to teach the people that there are only two factors that conduce to human happiness and make nations great and powerful. These two factors are PEACE and WORK.

A. R. Hollmann.

Apatzingan, Mich., Mex.

(*To be Continued.*)

HEREDITY AND TUBERCULOSIS

A recent lecture upon tuberculosis, heredity, and environment, by Prof. Karl Pearson, F. R. S., Galton Professor of Eugenics at the University of London (now issued in pamphlet form by Dulau & Co., Ltd., 37 Soho Square, W. London. Price, 1 shilling), deserves to be brought to the special notice of the medical profession, and more particularly that portion concerned with sanatorium and dispensary treatment of tuberculosis.

In the introductory paragraph of his lecture, Pearson indicates what constitutes the necessary preliminary preliminary step in an adequate investigation of tuberculosis, namely, a scientific inquiry into the relative importance of (1) the hereditary factor; (2) the environmental factor; (3) the liability to infection. Such complete study has not yet anywhere been made; and the hereditary

factor in actual practice is almost universally ignored.

On the basis of careful statistical studies of data relative to tuberculosis, Pearson has consistently urged for more than a decade the prime importance of the factor of a hereditary constitutional predisposition or susceptibility (or lack of resistance) to tubercle infection. Pearson stands almost alone among scientific students of tuberculosis in cogently and fearlessly using this point; yet, a careful reading of his papers cannot help but carry conviction, perhaps rightly of varying degree, to any, it seems to me, but the hopelessly biased.

Pearson analyzes two pedigrees collected by Klebs. Among 16 cases of marriage of phthisical individuals, there are only 2 where *both*, husband and wife, were phthisical. In fact, 62 percent of the tuberculous members lived to adult life, of whom 45 percent married. Of these, only 12.5 percent had diseased mates, but 79 percent of their offspring were tuberculous.

If the phthisis in the children is owing in the first place to infection from parents or to a common environment, we should anticipate that more than one-eighth of the mates of phthisical individuals would themselves be phthisical. "This in Germany is very nearly the number of phthisical persons occurring in the population at large. . . . . It is less easy to believe that the infection-factor here is the principal source of the heavy mortality, as the members of the stock have lived in widely separated homes and under very divers conditions, flying from the family curse." (P. 4.) A further analysis of these data gives, among others, this strikingly improbable result: the father is twice as dangerous to the child, if the source be infection, as the husband is to the wife.

Hamburges and Monti, following the cutaneous test by an injectional one, have found 94 percent of the children of Vienna, between the ages of 11 and 14, to be tuberculous; the great proportion, however, recover. But the existence of this enormous number of infected children seems to demonstrate ubiquity of infection. In some, the disease develops to full intensity; in others an immunity is established.

Infection from parents cannot be the chief source of the spread of the disease among children. We are constrained to hold that "certain stocks are relatively more immune than others." Pearson's most striking conclusion, based upon apparently wholly adequate data, is, that "during the years of tubercle bacillus, of sanatoria, and of the fight against tuberculosis the rate of fall in the death rate from phthisis, instead of being accelerated, has been retarded." (p. 28.)

Pearson deprecated the fact that "hardly a single sanatorium in this country publishes a report from which it is possible to extract information of scientific value as to their efficacy." This is equally true of other countries. In the interests of scientific accuracy and an effective procedure in the warfare against tuberculosis, this condition should speedily be altered.

He finds no evidence to show "that sanatoria have in any way prolonged the lives of consumptives in a marked or substantial manner." (P. 35.) The percentage of "cured" is swelled by incipient cases where the victims in presanatorium days (and no less now) recovered spontaneously. Examination of the records of English and German sanatoria shows: "In one case, of the discharged patients, 57 percent are actually dead three and one-half years after leaving; in the other cases, 55.6 percent are dead or unfit for work in four years after leaving." (P. 36.) "If . . . . the constitutional factor is as important as, nay, is more important than, the infection-factor, then from the eugenic standpoint a grave responsibility rests upon those who assert that infection is everything, and that stocks with hereditary tuberculosis diathesis have no real existence." (p. 43.)

Pearson further advises as follows: "Admit that sanatorium treatment is purely experimental, admit that dispensaries are another experiment, and that tuberculin is another and perhaps more hazardous one, and there is nothing more to be said than the words: 'Experiment, but record your observations in such a manner that the trained mind can ultimately measure their bearing on human welfare.'" (P. 44.)

The pedigrees of pathologic states filed at the Galton Eugenics Laboratory are interpreted to show that "the bulk of the tuberculous belong to stocks which we want *ab initio* to discourage. Everything which tends to check the multiplication of the unfit, to emphasize the fertility of the physically and mentally healthy will *pro tanto* aid nature's method in reducing the phthisical death rate. That is what the eugenist proclaims as the 'better thing to do'; and 1,500,000 pounds spent in *encouraging healthy parentage would do more than the establishment of a sanatorium in every township.*" (Italics my own.)

H. E. Jordan.

Charlottesville, Va.

[Dr. Jordan is chairman of the Eugenics Section of the American Association for the Study and Prevention of Infant Mortality, and holds a chair in the University of Virginia. We shall be greatly pleased to hear from him again. Every physician should be interested in the subject of eugenics.—Ed.]

HELP FROM ALL MEN AND ALL SCHOOLS

When at times I must economize by cutting down the number of medical journals taken, yours is the last one to stay on the list. Why? Because you are not narrow enough to be tied down to any one system of practice, but give all of them a chance to show up their best and most successful points.

The practice you have of collecting therapeutic notes from practitioners on the field, makes your journal, in my mind, one of matchless value. This, with occasional contributions from various doctors of any and every school, gives me ideas the application of which enables me to do things the other fellow says are impossible, both in acute and chronic cases.

First I studied for my own health's sake, but since getting interested in the subject I am studying broadly, so that I can do "impossible" things, according to the other fellow's ideas.

Almost anybody can do the common things you know, but why stop at that when there are so many interesting points along the line the search for a treatment or treatments that shall cut short acute attacks, alleviate chronic troubles, and relieve the "incurable."

Chester W. Harper.

El Campo, Tex.

[It is surprising how often the "impossible" may be accomplished when we go at it right. Fact is, many things *seem* impossible because we do not understand them fully.—Ed.]

DOCTORS' PUBLICITY AND LEGISLATION. THERAPEUTIC HINTS

In Dr. Blanchard's article in the April number of this journal I wish to indorse what he said in regard to doctors and publicity. The ethics of our noble profession are all right; but all is not fair in practice, as one, by virtue of his prominence, can take advantage of the lesser lights and thus secure advertising the latter could not get if they ran full page advertisements.

To illustrate: A struggling young doctor was driven to his wits' end to make a living for his family. Thinking to attract some business, he had business-cards printed on which he claimed to be able to cure a number of stated chronic diseases. The state board of health called him before them for explanation. The young doctor had prepared himself with clippings from the newspapers regarding wonderful operations the president and other members of the board had performed. After reading them, he asked whether his way was any worse than this kind of socalled ethical advertising. The board called off the case, and one of the members gave the young man a place in a contract-practice.

No one has fought quackery more than I have. While acting as editor of a small weekly newspaper I wrote a number of articles explaining the patent-medicine evil and all forms of quackery; I also bared the facts in regard to osteopathy, chiropractic, Christian Science, and all the other fakes.

Now, with all my radical views along these lines, I do feel that, if we are to get a chance with the public at all, we shall have to do something more than joining churches, lodges, and the like, to get business. It certainly will do much good to send out, from time to time, literature that is helpful to the people. At the same time, in a modest way, with no ridiculous claims, we can state what we are doing, and in that manner bid for business.

There is no hope in legislative enactments to put a stop to the fakers and patent-medicine evil. The public has been reading the false claims of the fakers so long that they take those statements as authority, consequently doubting what a reputable physician among them tells them.

All of us are after business, and many who hold up their hands in horror ar advertising will cut fees below yours to get the business. Which is the more honest? Think it over, then express yourselves; roast my views, if you wish, since I am an ethical physician, member of county and state societies. I have had it "put over me" by these men, who do anything to get the business except honest above-board advertising.

Now, to change the subject. What trouble, I should like to know, have you had in examining patients who wear union-suits? It is necessary to strip them naked if you wish to get to the abdomen or chest. To me, they are an abomination.

In rheumatism, I have had excellent results with the rheumatism phylacogen. Pain

is relieved marvelously quickly and recovery is very rapid under its use, the main thing noted being a very bad stiffening of the affected muscles afterward and some soreness; after this leaves the patient is entirely well. What has been your experience? I wish to know all possible about the treatment, inasmuch as we have more rheumatism here in Montana than anything else.

In goiter, I find echinacea, calcidin, ergotin, with iodine locally, almost always does the work. At present I am trying quinine hydrobromide in a case on hand. There are a large number of goitrous subjects in this mountainous country. Does anybody really know the cause of this disease? The best authorities, I believe, are in doubt about it.

Whenever I have to do circumcision I choose the dorsal incision. My results are better than by any other method. Stretching, I believe, is practically worthless.

Just now, it seems, all the talk is about the wonderful Friedmann cure for tuberculosis; but out here, in this healthy country, we do not need a serum cure, for the mountain-ozone is so abundant that, with just a little care, victims who have been given up in the East recover here. I have in mind a number of patients who came here in the latter stages and recovered completely.

Here, in the Gallatin Valley, we have a number of health- and pleasure-resorts that are well patronized, but are little known to people in the East or South. The climate at these places is ideal, being warm in daytime, but cool nights, from April or May to Christmas. The altitude is from 5000 to 8000 feet, while the scenery and fishing is better than at any place in the world. The resorts are all well managed, and board is very reasonable; the fare being of the best. It seems strange that more doctors do not send their tuberculosis patients here, as we never have the hot, humid weather that prevails in New Mexico and Arizona. Anyone desiring information in regard to these resorts can get it by addressing me, enclosing stamp.

F. E. McCann.

Salesville, Mont.

[Brethren, beware this lure of professional advertising, open, insidious, or "semi" ethical. No telling where it will lead you.—Ed.]

THE QUALITY OF COURAGE—AND A CHLOROFORMED INDIAN

In 1887 I was superintendent of the Territorial Board of Health of Dakota, and because I was the "big medicine-man" of the Territory I was sent for by Gray Wolf, a chief of the Sioux, to come up into the "Bad Lands" and see what I could do for one of the "bucks" who had been shot through the right knee.

Taking my emergency-case with me, I went as far as Mandan by rail, on the Northern Pacific, and from there on horseback to the Indian village of my destination. I found my patient, a young buck of about twenty-four years of age, suffering intensely, but stoically, as an Indian always does. The bullet (a "44") had gone through the knee-joint from right to left, badly shattering the ends of both bones. I had no difficulty in explaining to the chiefs the nature of the operation I intended doing, all of them understanding enough English to comprehend my explanation, but they all objected to the use of an anesthetic. However, I insisted, and (rashly) assured them there was no danger whatever—thereby proving myself a false prophet.

With a blanket spread on the ground for an operating-table, water from the "Little Muddy" for cleansing purposes, and without assistance of any kind, I proceeded to perform a bloodless resection of the knee-joint. The anesthetic used was the old A C E mixture, and by the time my patient was "ready" I had learned that anesthetics do not act upon an aboriginal the same as they do on a white man, and I was "up against it."

The moment he was under the anesthetic he was, to all outward appearance, dead. Still, he had a fairly good pulse, and so I proceeded with the operation as rapidly as possible. But when I *cut* into the flesh and he did not bleed, Gray Wolf jumped to his feet, gesticulating wildly, and in vehement language informed me that "when you cut a live man he bleeds, and if he doesn't bleed he is dead."

Talking against time, working as rapidly as I could, watching my subject closely to see that he still *was alive*, I kept back the savage horde, and finally finished that operation, with the perspiration running down my back and cold chills running up that same route, and the prospect of a sudden and violent exit on my part staring me in the face. For, with a few words, spoken in the Sioux tongue, Gray Wolf had converted that heretofore peaceful glade into a pandemonium of noise and excitement; and I finished my operation with a howling, shrieking band of savages dancing a war-dance within ten feet of me, and old Gray Wolf telling me that if

I didn't wake the man up I surely would be put to death. [Wouldn't this have been a dandy case for H-M-C?—Ed.]

They say that from the time a man starts to fall out of bed to the time when he strikes the floor he can review his whole life. I do not know anything about *that*, but I *do* know that all through that operation, with death hovering around the patient as well as the operator, old General Sibley's prayer kept running through my mind.

Away back in the sixties, General Sibley was ordered by the War Department to take about three hundred soldiers and guard a herd of cattle from down near Fort Ridgely, in Minnesota, up to Fort Totten, in the Devil's Lake country in Dakota. I was one of the escort. General Sibley was one of the bravest men I ever knew, and was a fighter from the ground up, but on that trip he showed a peculiar streak in his character that reminded me of Napoleon's strange fear of cats. By the time we reached Brown's Valley, near Big Stone Lake, the cattle were very footsore and we stopped there to give them a much-needed rest. The General took a notion to go fishing on the lake, and I, being his orderly, hustled around and found a dugout canoe. The General, myself, and Lieutenant Tilton, all got in and I paddled out on the lake. The water is shallow, and when a squall strikes it, it is lashed into a foaming, white-capped horror. One of those sudden squalls struck us, and, although the General would ride into the thickest of a fight with the *Indians*, and never seem to know that there was any danger, the white-capped waves struck terror into his soul, and this is what he said:

"Lieutenant, I think we are in imminent danger, and someone ought to pray, will you kindly pray for us?" "The danger is imminent enough," said Tilton, "but as our superior officer it seems to me you ought to make the prayer." "All right, boys," said the dear old General; "but the truth is, boys, I never prayed in my life and it will not be much of a prayer. But I never shirk a duty, and if you really think the danger is as imminent as I think it is I will do my best." By this time we were really in danger, and the canoe was nearly half full of water. The General was white with fear and evidently in a regular blue funk. "Please, pray," said Tilton, "and if we ever are to get to dry land you will have to hurry." And this is the prayer, word for word—and if ever a man prayed in earnest, with the sweat of helplessness on his brow and the fear of death in his soul, that man was General Sibley:

"O Lord God! My dear Sir: I have never had the pleasure of addressing you before, and should not trouble you now, but the case seems urgent and if you will only guide us safely to dry land, I promise you, on the honor of a man and a soldier, that you will never catch me out on Big Stone Lake in a damned old dugout again. Very truly yours, H. H. Sibley, Brigadier General, U. S. A."

And God answered his prayer. And, also, my "buck" recovered; but whether this was due to my good surgery, forcible dilation of his sphincter, hypodermics of nitroglycerin, or my fervent prayers, I shall never know. What I do know is, that, if I did not repeat General Sibley's prayer verbatim, I must have said something like it; for I remember promising the Lord that if He would help me out of that scrape I should never again anesthetize a savage in his native wilds without at least a regiment of soldiers as a guard. For, on that day, in June, 1887, there was a time when my patient and I, both, stood an equal chance of going to the "Happy Hunting Grounds" forever.

All of which goes to show that the quality of a man's courage sometimes depends on the kind of danger by which it is put to the test, and that what passes for courage sometimes is fear.

Was it courage that made me "stick to the job" and save that Indian's life? Or was it fear?

Geo. D. Swaine.

Cleveland, O.

THE CITY SURGEON VERSUS THE COUNTRY DOCTOR

Any person possessed of a little mechanical ability and plenty of nerve can become a surgeon. But it takes a philosopher to be a physician. The surgeon never works in the dark—he always sees his work. The physician never works in the light, but must always hunt the hidden cause from the symptoms manifest. And clinical experience at the bedside of the sick—real human folks, not cats and dogs—is the only true instructor.

The surgeon may not diagnose his case until he operates upon the patient. One noted Chicago surgeon was asked by a visiting doctor what he expected to find when he got cut in. The surgeon's reply was, "How in h— do I know until I get in," showing that even the noted ones of those who are always on the "sharp edge" do not care to venture even a conjecture of an internal condition without ocular demonstration. As another

illustration of the helplessness of the ordinary surgeon in internal troubles, I will cite a case I saw in a big Chicago hospital about four years ago.

A young married woman applied to the hospital for treatment because she had no baby after four years of married life. So the surgeon decided to remove one ovary and see if she could not do better with one than with two ovaries. And that surgeon thinks he is some pumpkin in his branch, too. The condition of the husband was not examined. The condition of the os uteri was not examined. In fact, nothing was done except to castrate the poor victim—to make her have babies! No, all that surgeon thought of was to show the onlooking visiting doctors what a slick abdominal operator he was.

Here is another example, also from a Chicago hospital. In this case, the whole vault of the cranium of the individual was removed. It was all very nicely done, and certainly it required lots of nerve. There is no doubt that it was a most brilliant operation, all right, but—the patient died.

Very likely, those who have read thus far have discovered that I am an internist. I believe that Almighty God has placed in nature a remedy for every ill that human flesh is heir to, and that it is the province of the physician to find it. Also, when He made man, He made a nicely balanced piece of mechanism, with nothing to spare, every part needful. "Like a rivet or bolt in a great machine, it's all important though all unseen." I believe in honest conservative surgery, but I do not believe in the people being exploited by that branch of our honorable profession who always have their ever-ready scalpel in hand.

I and my wife (we both are physicians) hied ourselves away to the city by the lakes some four years ago to find something that we might bring back to Kansas with us and use in our practice out here on the prairies of the Sunset country. But after eighteen months' stay in the city and visiting many of the hospitals and postgraduate schools, we found surgeons, surgeons every where, but hardly one doctor represented in any hospital. Many a time, as we were sitting in the clinics and some "victim" was brought in, wife would say: "Why, she doesn't need any operation. I can cure her, sound and well, without operating." Then I would have to talk back: "Keep still. I know she doesn't need the operation, but the surgeon needs the money."

When! When! Oh when! will such things cease? When can we go "back to college" and bring home something worth while? If it had not been for Dr. Schroth's quiz-course and our trip to Ravenswood, with the gift of Dr. Abbott's little book and the 12-vial case, we should have returned after eighteen months, say, absolutely empty-handed as regards any ideas that we could apply in our midnight vigils, in our fight against the Grim Monster, or to ponder over while we drive the long roads through mud and slush and over the rocks to the bedside of the sick and pain-racked people of our parish.

To be sure, the memory lingers, but it is the memory of an exploited people. The memory of an attempt of some surgeon to engrandize himself before the "Rubes" who come to see the show. There is no memory of an effort to learn or to teach what is wrong with the body-chemistry, which is the foundation of the present pathologic condition, nor the application of a proper therapeutic proposition to correct the same.

There is no memory of anything new in the handling of typhoid fever; but, yes, I was shown a new stitch—I believe they call it a box-stitch—to be used when the pyloric orifice of the stomach had been despoiled and the severed end of the duodenum was stitched to the lower curvature of the stomach.

There is no memory of a real good treatment for pneumonia, but I did see at a private clinic a surgeon dilate a uterus and with the forceps pull out about a three-month fetus, and then curette out the secundines, all at one sitting.

There is no memory of any sure, quick and easy way to diagnose an obscure case of lues, nor of any improved treatment for them. But I did see a very nice vaginal hysterectomy by one of the "big guns," removing a perfectly normal womb, and heard him say: "Now, gentlemen, this is the last $500 operation for today, and there will be nothing more until next Tuesday."

But enough of it—I am nauseated. When will such things cease? When will commercialism be divorced from honest medical practice? When will the colleges quit overeducating on technicalities and get down to the hard sense of clinical experience?

Only when we of the General Practice tell our experience. I feel like shouting: "Awake! ye monarchs of the plains! Arouse yourselves ye kings of the long, hard road, who fight the death-angel single-handed in some lonely cabin home surrounded by weeping relatives and lighted in your work by the flickering rays of a smoky coal-oil lantern—and then come off more than conqueror."

Tell us how you did it. That is what we want to know. What care we for Mayo's box-stitch? What care we for slick ways of aborting pregnant women? What care we for vaginal hysterectomies of healthy wombs?

We want to know what cured Johnny's colic and what knocked Billy's sore throat the first trip, or what brought the kinks out of Tom Jones's wife. Ye general country practicians, ye of the hard roads, of hard sense and of the hard-earned dollars, ye are the real highbrows in medicine. And now, if you will just write out and send in some of your rich clinical experience, we can make CLINICAL MEDICINE the best, most down to date postgraduate course that can be furnished us anywhere—and we shall not have to leave home to get the benefit of it, either.

WILL K. JOHNSON.

Gas, Kans.

OUR LONDON LETTER

Not being an alienist, I am not going to be betrayed into referring to the doings of the militant suffragettes, but I cannot keep my pen altogether away from one little item of news thereto anent. One doughty suffragette, who had been condemned to eighteen months' imprisonment for setting fire to the pavilion in Kew Gardens, was released after going without any food, absolutely, it is said, for thirty-two days.

A year or so ago Mr. Upton Sinclair, of "Jungle" fame, published a book advocating the fasting-cure, in which he maintained from experience, so he said, that after the first few days the fast may be prolonged almost indefinitely, and that not only without any serious bodily discomfort, but without the fasting individual becoming one whit the worse for it—in fact, deriving great physical benefit. The feat of Miss Olive Wharry (the name of this "martyr for the cause"), if true as related, seems to support Mr. Sinclair's contention, for she actually does not appear to have been any the worse; indeed, it is said, she even was able for the first twenty-nine days to conceal from the prison officials the fact of her being on hunger-strike.

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From the rather ingenuous statement of the "prison secretary" of the Women's Social and Political Union, it looks as if "the secret hunger-strike needs a good deal of ingenuity to get rid of one's food—three meals a day. It is generally disposed of during exercise time by being surreptitiously passed to other prisoners." But the ostensible purpose of the hunger-strike being to terrorize the authorities into releasing the subject thereof, lest a catastrophe ensue and a hornet's nest of misguided sentimentalists be thus brought about the official ears, it is decidedly difficult to conjecture why any attempt at all should be made to conceal the fact of fasting. The explanation limps.

Since of two explanations the most likely should be chosen, one is tempted to suspect that the disposal of the food during the first twenty-nine days was effected in precisely the same manner in which food is usually disposed of, by the hungry—be they just common mortals or militant British suffragettes. So, Mr. Upton Sinclair's theory misses the very effective support of a demonstration under strict test-conditions.

The name of Sir Alfred Lewis Jones, head of the shipping firm of Elder, Dempster & Co., of Liverpool, is held in especial esteem wherever the subject of tropical medicine commands attention. Sir Alfred began life in a very humble way, and entered the firm of Elder, Dempster & Co. in a minor position, raising himself ultimately, by his industry, ability and integrity, to the point of becoming its head. He developed the commercial aspects of the western coast of Africa to an extraordinary degree, and his prescience enabled him to foresee its possibilities when sanitary science should have had its innings there.

Some twenty odd years ago, the writer accompanied Sir Alfred on one of the latter's own ships, to the West Coast, and was electrified by being requested to write a small book about Sierra Leone—"the white man's grave"—as a health-resort. This request he regarded as a joke at first; but to his astonishment found that Sir Alfred was serious. Sierra Leone today is a recuperating station for those dwellers on that coast who are convalescent from the coast-fever.

To Sir Alfred Jones the Liverpool School of Tropical Medicine owes its inception, and it is mainly indebted to him for its support. By his will he has bequeathed to it the sum of $200,000, with a further sum of like amount when annuities payable out of his estate shall have ceased. The fund is to be devoted to providing a new wing in the Liverpool Royal Infirmary for Sufferers from Tropical Diseases, to erecting new premises in Liverpool for the study of those diseases, and to erecting and equipping a clinical laboratory at Sierra Leone. He further has left to different hospitals sums varying from

$50,000 down, besides large bequests for other philanthropic objects and religious institutions, and also a sum ultimately amounting to $400,000 for the creation of a benefit scheme for the employees of his various business concerns; in this manner publicly recognizing his personal obligations. He had a high regard for the medical profession, to many members of which, this writer included, he performed many acts of personal kindness.

The effect of the Insurance Act on hospitals promises to be very serious. The Hampstead Hospital for Consumption, a branch of the Mount Vernon Hospital, has been abandoned in consequence of the increased expenditure necessitated by this act and the serious fall in income occasioned thereby, and it has now been put up for sale. Among other hospitals that have already put on record its blighting effect on their subscription-list, are the Italian Hospital in London, the Royal Alexandra Hospital at Rhyl, the Western Dispensary Westminster, the London Fever Hospital, the London Hospital, the Birmingham General Hospital, Manchester Royal Infirmary, Aberdeen Royal Infirmary, the Royal Victoria Infirmary, Newcastle-on-Tyne, and many others.

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The end of instruction in the ordinary principles of health was perhaps never more forcibly shown than at an inquest held recently, at Somershaw, Huntingdonline, on a child two years old. This unfortunate 2-year-old youngster, it appeared, was fed as follows: His breakfast consisted of fried eggs, his dinner of Yorkshire pudding, his "tea" of bread and butter and tea, his supper of warm milk and cheese, and his extra supper (after the picture-show?) of roast pork and beer! Thus do the dictates of fashion disseminate the depraved mode of living of the "hupper suckles" to the lower sucklings!

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According to the figures of the Registrar General published on April 7, there was a fall, in the death rate, from the rate for 1912, which was 14.56, to 13.32 in the subsequent period. But the figures also show some less pleasing falls, namely, that of the birth rate, from 24.37 to 23.89, and of the marriage rate, from 17.98 to 15.50. Both these latter drops it is easy to understand, however, when we consider how increasingly difficult the oppressive taxation of the present administration of social charlatans and quack doctors of the body politic is rendering life for the numerous betwixt-and-between classes of people. While the price of everything, including cost of manual and mechanical labor, is going up with an unprecedented rapidity, and while fictitious and hypothetical panaceas for social betterment are being promulgated as regardless of expense as of any reasonable certainty of their probable efficacy, proportionately the heaviest burden of which fall upon the aforesaid "betwixt and between classes," the incomes of that class alone do not improve, but either remain stationary or tend to diminish. The effect upon marriages and births is a logical corollary. M.

London, England.

DO YOU WRITE MUSIC?

Among the thousands of readers of CLINICAL MEDICINE there doubtless are some who write music. If so, I should be pleased to have them "try their hand" on this anapestic poem. It is especially adapted to a good, strong, patriotic air. Brethren, send me your music. I shall appreciate it very much and shall be glad to report through CLINICAL MEDICINE my preference among those submitted to me.

I

A WEST VIRGINIA STATE SONG

"Mountaineers ever free," thus our motto is sung
By the poet who prides in his own mother tongue.
With devotion sublime, a sound cause to uphold,
West Virginians vowed to remain in the fold.
Patriotic, our sires, ever loyal and brave,
That this nation might live, their own blood freely gave;
For in God was their trust, upon Him did they lean,
Till with kindred at home they once more should convene.

II

Old Dominion, from whom, like Minerva, full grown,
Into being, from Jove, sprang to join in his throne:
So, thou, "Mother of States," and of "Presidents," too,
We shall never forget filial bonds to renew.
There is Washington, Jefferson, Marshall, and Lee,
Whom we justly revere in our own jubilee.
Old Virginia, first in our hearts to adore,
Thy traditions and fame we shall share evermore!

III

Eighteen hundred and sixty-three, pivotal year,
When we severed the ties that had held us so dear;
June, the twentieth day, our Great Seal indicates,
We began our career in the union of States.
To the smoke of the contest, the roar of the guns,
West Virginia summoned her valorous sons.
In the tumult of war, in the midst of the strife,
Like the phoenix of fable, we leaped into life.

IV

When the North and the South their contention did cease,
Through our land again hovered the sweet "bird of peace."
What a sequel, unique! those in battle array,
In a bond that grows stronger with each passing day.
On the hills and the mountains, in valley and plain,
Are the lowing of kine and the waving of grain;
In the depths of the earth there are treasures untold,
While our streams a rare treat of great beauty unfold.

V.

To your duties, young men, with unwavering zeal!
For to you is our future for wo or for weal;
On ye veterans, too, of past victories won,
We shall call for advice in the conflicts to come.
Now at peace with ourselves, now at peace with the world,
In the breezes doth wave our old banner unfurled:
Should a foe from without once intrude or inveigh,
Round the flag they will rally, the Blue and the Gray!

CHORUS

Let the young and the old, let the brave and the true
In one chorus unite for the Red, White and Blue.
Then hurrah for the Stars and the Stripes, our ensign,
Oh, ye sons of our State, what an emblem divine!

J. A. Cox.

Wheeling, W. Va.

THE WORK OF VON RUCK

In the May issue of this journal, Dr. H. J. Achard contrasts Dr. Friedmann's tuberculosis "cure" with the vaccine and aqueous extract of Dr. von Ruck, of Asheville, North Carolina, and makes a plea for the investigation of the claims set forth by the latter gentleman.

I had the misfortune to become a tuberculosis subject some months ago, and set about to determine the best place for treatment and the best remedy to apply. Investigation led me to select Asheville and the institution conducted by the von Rucks; not, that I thought Asheville was more healthful than Covington—because according to the United States census Covington ranks as one of the healthiest places—but because of the reputation of its physicians.

After partial recovery, I was permitted to assist in the laboratory. The experience was a revelation, and if the simple, direct methods of diagnosing tuberculosis and of controlling the treatment were more generally known to physicians they could more intelligently and successfully battle with this disease.

The frank, open, methods, the quick "precipitin" substitute for the complicated opsonic index, and the apparent proof of the immunizing and destructive action of the serum and tuberculin extract, as shown by the microscope, in addition to the fact that Dr. von Ruck offers his discovery to our countrymen without thought of financial reward, are the features that attract interest to our fellow countryman.

Let there be more investigation of his claims. Perhaps, if you publish this letter, it may aid in arousing an interest that may lead to an investigation.

W. LAURENCE STEVENSON.

Covington, La.

PREVENTING QUININE RASH

Dr. R. E. Hale, of Bellamy, Alabama, writes us as follows:

"Regarding the prevention of quinine urticaria, it might be added to your recent discussion that, if the stomach be spared and the drug used hypodermatically, no rash will result."

This is a good point and we are glad that Dr. Hale has brought it out. In giving quinine hypodermically, always use a soluble salt. The hydrochloride usually answers every purpose, although quinine and urea hydrochloride, so much employed nowadays as a local anesthetic, is most efficient, easily administered, and causes a minimum of pain. The dosage, of course, will depend upon the character of the case and the age of the patient.

EMETINE

The value of ipecac in the treatment of enteric diseases has long been recognized by physicians residing in the locality in which these diseases prevail, but they are unanimous in pointing out that results depend upon heroic dosage, and, further, that after a few such gigantic doses have been given the emetic property of the drug becomes predominant, which then necessitates its withdrawal, for the comfort of the patient. The advent of the active principles, however, has solved this problem and rendered ipecac medication absolute and effective.

A study of the chemistry of this drug shows the presence of two chief alkaloids, emetine and cephaeline; the former being classed as an expectorant and locally acting emetic,

while the principal emetic property resides in the cephaeline.

While emetine is a most valuable and useful adjunct in the treatment of simple summer diseases, it is in the treatment of Shiga and amebic dysentery that it scores its most brilliant triumphs and has established itself as a specific. In the ordinary cases of diarrhea or dysentery, emetine, in dosage of 1-64 grain, may be given in conjunction with other forms of treatment, one granule every two to four hours. It should be administered dry upon the tongue, and the patient should remain quiet for at least an hour after administration to prevent the occurrence of nausea. In the Shiga and amebic dysenteries, emetine can be exhibited per mouth with good results; but here much more rapid and brilliant results are achieved by the hypodermic use of the soluble hydrochloride, which, as shown by the brilliant and almost unbelievable work of Rogers, possesses, an almost uncanny and magic power in causing a disappearance of the amebæ from the intestinal tract.

The work of Allen, of North Carolina, in similar cases bears out fully the results recorded and published by Rogers, to whom must be given the credit of bringing to the notice of the profession the marvelous therapeutic power of enetine hydrochloride in the treatment of amebic dysentery. It has, no doubt, appeared incredible to many readers that, as Rogers and Allen report, doses as high as 4 grains of emetine can be given hypodermically without producing violent emetic action.

However, a study of the *modus operandi* of emetine in the production of emesis will, I think, clear up the question. Emetine being a local emetic, produces emesis by causing an irritation of the terminal nerve-fibers in the gastric mucosa, hence, when taken into the stomach in sufficiently large doses it produces evacuation of that organ; but having no central action it is without effect upon the vomiting-center in the medulla and therefore its exhibition per hypodermic is devoid of emetic effect.

Lack of space will not admit of a lengthy discussion of the details of the emetine treatment of amebic dysentery. Those who are sufficiently interested the writer would refer to Rogers' report printed in *The Therapeutic Gazette* of December 15, 1912, and the report of Allen in *The Journal of the American Medical Association*, in both of which papers the subject is discussed with the ability and thoroughness characterizing the authors, and the dosage, technic, and details of treatment are fully outlined.

H. H. Redfield.

Chicago, Ill.

FOURTH INTERNATIONAL CONGRESS OF SCHOOL HYGIENE

The Fourth International Congress on School Hygiene is to be held at Buffalo, New York, August 25 to 30, under the patronage of President Woodrow Wilson. A comprehensive program of papers and discussions covering the entire field of school hygiene is being prepared. There will also be scientific exhibits representing the best that is being done in school hygiene, as well as commercial exhibits of practical and educational value to school people. Nor will the entertainment of the delegates in any way be a minor feature. Plans are being made for a series of social events, including receptions and a grand ball, a pageant in the park, and excursion trips to the great industrial plants of Buffalo as well as to the wonders of Niagara Falls and the Rapids. Buffalo itself has just taken up a collection of $40,000 for the purpose of covering the expenses of the Congress.

Delegates will attend from all the leading nations, from every college and university of note in this country, and from various other educational, scientific, medical, and hygienic institutions and organizations. The Congress, further, is open to all persons interested in school hygiene. Membership may be secured by the payment of a five-dollar fee. Applications should be sent to Dr. Thomas A Storer, College of the City of New York, New York City.

THE SLEE MEDAL

Lieutenant George R. Callender, a student in the Army Medical School, at Washington, on May 31 was awarded the Sternberg gold medal for superiority in biology. This medal was presented by Lieutenant Richard Slee, of the Reserve Corps, in honor of his former teacher, Brigadier General George M. Sternberg. The address of presentation was delivered by Brigadier General Sternberg himself. It is of interest to note that the Army Medical School was founded by Brigadier General Sternberg.

Many cases of pneumonia are benefited by the internal use of calcium. Also, keep the alimentary canal clean, and watch heart and pulse.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

(*Continued from page 539, June* CLINICAL MEDICINE)

HERE, as in all cases of acidemia, the great need of the system is water, and it should be drank in generous amounts, whether in the form or mineral waters, ordinary water or milk. Purgatives require very careful adjustment. Aloetic as well as the cascara purgatives, it should be borne in mind, tend to produce congestion of the hemorrhoidal veins, with resultant undesirable irritation; the saline laxatives, as a general rule, are best for the purpose, although in elderly people they must be prescribed cautiously. In no small number of cases of irritable weakness, a small dose of a mercurial, followed by a morning laxative saline draught, acts rapidly and very beneficially in securing elimination—which is what is needed, not simple purgation.

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In the deeper type, the removal from the habituated home surroundings and conditions, and is imperatively indicated. Hydrotherapy, elimination, and exercise, faradism and franklinization along the spine often are found necessary and valuable. The necessity, in this type of the use of water is no less mandatory than in the first type. Since, however, the patient has an intense repugnance for water, as a rule, the physician will have to exercise much ingenuity to secure compliance.

The acidity of the urine must be reduced to normal, i. e., to between 30 and 40 degrees. This is best accomplished by the mud-baths (a part of the Mudlavia treatment) in connection with giving teaspoonful doses of sodoxylin in about three-fourths of a glassful of water about two hours after eating, say, in middle forenoon, middle afternoon, and at bedtime. To bring the acidity of the urine down to normal will take from one to four weeks, sometimes even longer. If there is much intestinal decomposition, as shown by the presence of indican in the urine, intestinal antiseptics, preferably the compound creosote tablets, or the sulphocarbolates are indicated.

Now as to the diet. Two factors are to be considered here—the quantity and the kind of food eaten. In the first place, the proteids must be greatly diminished and, while each patient may have to be treated differently as regards food, there are a few general rules which are applicable for nearly all.

The ordinary meats should be replaced by chicken and fish, and by vegetables. In the case of those where the gastric acidity is due to sugar fermentation, starchy foods and sugars should not be partaken of. In others, fruit, both cooked and uncooked, must be forbidden. It is well to be sparing in the use of water with meals, but plenty of water should be drunk between meals. Coarse foods, and not too much at a time, must be eaten sufficiently leisurely to insure thorough mastication and insalivation before swallowing them.

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Dr. Mitchell assumed that sometimes in nervous people the activity of a normal function is competent to cause distress in other organs or to awaken unusual symptoms. He cited the case of a lady who, after passing water, had slight chilliness, twitching of the face and extreme palpitation of the heart; yet, the act of urination was, in this case, painless and, in fact, absolutely natural. It is obvious that there is here a failure to recognize the disturbance of the general balance of the nervous system that constitutes health, and a tendency to attribute as reflex what is simply an exaggeration of the normal function of one organ through lessened inhibition of the central nervous system which gives the local excitomotor ganglia full play.

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Perhaps nothing better illustrates the position of the Weir Mitchell school than reference to the bladder as a cause of nervous phenomena. The bladder, through its affectability to faint stimuli, is—as Mooseo and Pellicani have shown—an even more delicate esthesiometer than the iris, and is probably the most delicate in our body. Contraction of the bladder follows directly upon the slightest stimulation of any sensory nerve, and all the varying conditions of the organism

that raise the blood pressure and excite the respiratory centers produce an immediate and measurable effect upon this organ. These reactions are much more delicate than those of the blood-vessels and cannot be paralleled by any other part of the organism.

The fainter vesical contractions hardly play a recognizable part in emotion, but when they attain a somewhat higher degree of intensity their influence is easily recognized. A nervous bladder, as Goodell puts it, is one of the earliest symptoms of a nervous brain. It has also been shown by Havelock Ellis that in women a full bladder tends to increase sexual excitement. It is obvious, therefore, that Dr. Mitchell put the cart before the horse in referring phenomena coincident with micturition to bladder disturbance as a cause. The Playfair school, a badly modified offshoot of that of Weir Mitchell, has the same bias.

The fundamental principle of the rest-cure is, to obtain mental and physical rest, and, as a consequence, increased nutrition by virtue of the removal from the old environment. This is a *sine qua non*, and the importance of which cannot be too strongly impressed upon the physician.

Merely changing the environment, however, is not in itself change. To take the patient away from home, is not sufficient. The visits of relatives and friends very frequently introduce the mental atmosphere of the home under which the nervous condition was born. Correspondence, likewise, is apt to occasion a home environment, since in letters people suggest this by saying too much or too little. In any event, such reticence or confidences produce introspection, increasing the worry element, because of the uncertainty thereby engendered.

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Here, likewise, is a danger from the attendant nurse, who, if trained in a general hospital, in her examination for symptoms, will immediately suggest the same to the patient and thereby only increase the introspective tendency. The suggestion of the symptoms in itself is not so serious as is the fact that the patient's uncertainty about his mental or physical state is increased. This particular detrimental influence all too often is ignored in the practice of our rest-cure systems; and this factor is peculiarly apt to appear in the rest-cure taken at home, where the patient is much more dependent upon the nurse—especially when a regular medical attendant is not in charge.

In most private nonmedical rest-cures this element of suggestion is completely ignored. The patient, under the pretense of getting rest, is simply left to brood alone, and when the nurse returns the brooding has given rise to fancies and uncertainties that are either ignored, contradicted or humored. Moreover, nurses trained in general hospitals are but too apt to impress the patient with their experience by the narration of medical and surgical cases in many of which the subjective symptoms were those of the patient listening. In this way, oophorectomies are described to women who believe themselves afflicted with serious ovarian difficulties, and gastrectomies are told of to patients who believe that their gastric neurasthenia means cancer; and so down the list of horror-tales.

The prevalent mental trend of the average patient requiring the rest-cure—whether from the secondary consequence of organic disease, from autointoxication or from neurasthenia, or from all three combined—is toward introspection, as has been already pointed out. And this, by all means, must be sought to be prevented.

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From introspection and subconsciousness of organ disturbance comes, as Jas. G. Kiernan has remarked, the nosophobia of the neurasthenic. Nosophobia is too often brutally regarded as feigned hypochondriasis, without reference to its underlying factor.

Nosophobia, it must be remembered, differs from hypochondriasis, in being a *fear* of disease rather than a *belief* in its existence. Hence, it is more terrifying than hypochondriasis. Nosophobia, taking a special direction depending on the quack last consulted, has a manifold basis: alcoholophobiac, pseudoreligious, toxicophobiac, psoric, "sex-puristic," testicular, uterine, "canalopathic," myopathic, osteopathic, cylindric, catarrhal, renal, vermicular, reflex, or any of many other directions.

The neurasthenic is peculiarly liable to suggestion, as were the crowds which were "cured" by Valentine Greatrakes in the seventeenth century, and as people nowadays are "cured" by Mother Eddy—alive or dead. This suggestion, however, as a rule, even in mild affections, has but a temporary effect. It may remove a mild obsession, but the introspection and the nervous conditions behind the same are not altered. The suggestion of morbid states, therefore, being in line with the state of nosophobia, naturally

may have very grave results; the more so, as such suggestion, by its influence upon the heart, lungs, liver, and kidneys, may cause great disturbance of those organs.

The action of the heart, lungs or other organs, as registered in the unconscious phases of the "ego," does not, as Kiernan points out, normally form a conscious basis for mental states. Their disturbed action, by destroying the inhibitions that relegate them to the unconscious, now raises them into the subconscious sufficiently to disturb the "ego," and thereby create conditions of anxiety, doubt, introspection, together with their emotional consequences.

These abnormal states of mind occur at first during sleep at the time of the lowest systemic vitality, thus producing the distressing dreams which so often precede the phobias and obsessions of neurasthenia. These dream impressions sometimes are so vivid that a hypnogogic hallucinatory process remains in consciousness, and which later often form a vague delusional, or false, memory.

The individual who, when in a state of nervous exhaustion, becomes conscious of the existence of a disturbed organ, whether resultant upon organic disease, autointoxication or as an expression of nerve-tire, has the first basis of a distressing obsession. The nervous invalids who thus become victims of suggestion are exceedingly numerous, and the average rest-cure, coupled with its conception that rest means simply idleness, tends to develop in their most intractable direction the very conditions it is intended to prevent.

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The obsession of the nosophobiac is too readily regarded as a delusion; and this leads frequently to its being humored, according to the latest distorted notion. The obsession of any type is more a fear than a belief. The patient needs reassurance rather than conviction. Indeed, as a rule it is the mingled feeling of uncertainty and the absurdity of the fear that is most distressing. This is the more emphatic, because of the doubt created in the patient's mind as to his mental integrity.

It is on the mental side of the rest-cure that dependence should be placed for removing the subject's state of doubt. Intellectual cultivation through reading by the nurse, and cheerful, yet logical, conversation by the physician on the source and character of the patient's fears is an excellent means of combating the distressing mental condition of rest-cure patients. Any system without this phase is worse than useless.

Among other errors prominent in the rest-cure as ordinarily practiced, is that of an erroneous dietetics. Considering that the conditions treated by the rest-cure are all of them states in which autointoxication is almost certain to occur, it seems strange that means are not taken to avoid this impediment through proper dietetic rules. To say that the patient must have nourishing food is but to repeat a platitude.

In dietetics, exactly as in medicinal treatment, the patient, and not the disease-label, must be considered. That milk, as pointed out by many rest-cure practitioners, is of value in many instances is undeniable; that milk in many patients, especially in cases of gastrointestinal neurasthenia, will cause gastrointestinal catarrh, is equally undeniable, albeit not generally admitted. That buttermilk many times will beneficially take the place of the harmful sweet milk in just such cases, is absolutely certain; yet, none the less buttermilk is forbidden by the average practitioner of the rest-cure.

Furthermore, that radishes, cabbage, cucumbers, parsnips, eggplant, turnips, carrots, squash, beets, potatoes, sweet-potatoes, as also veal, pork, bananas, berries may, and very frequently do, undergo decomposition in the intestinal canal, with consequent fecal absorption and resultant autointoxication, is now universally accepted as a fact. But, for all that, the application of this knowledge in the dietetics of the rest-cure is exceptional.

That water is needed in great quantities during the rest-cure, is admitted; but the hydrophobia so frequent in patients unfortunately is altogether too often heeded by the physician. Also, the necessity of hot and cold baths is well recognized; still, the patient's disinclination for them usually is humored by the average lay practitioner of the rest-cure.

Massage, which simply takes the place of the necessary exercise which cannot be taken without fatiguing the patient—since he has not only the will to exercise but also not the will to will—too often is given under the pretense of some occult, magnetic, osteopathic or hypnotic influence. But any procedure given under these guises to an introspective patient is, for reasons already outlined, a positive mental and, through the results of a consequent nerve tire, a physical poison.

AMONG the BOOKS

BIDWELL: "MINOR SURGERY"

Minor Surgery. By Leonard A. Bidwell, F. R. C. S., senior surgeon to the West London Hospital. Second edition, revised and enlarged. With 129 illustrations. London: University of London Press. Published by Hodder and Stoughton, and Henry Frowde. 1912. Price $3.75.

We often remark that, if a letter is to touch the heart, it must come from the heart. In like manner, if a book is to be of value in teaching, it must be written by a teacher and must embody the fruits of his own experience in teaching. This is what gives value to so many of the textbooks and manuals written by Englishmen, who take the occupation of teaching much more seriously than we Americans do.

The book under review represents the ripe experience of one of the ablest teachers in London—now, alas, unfortunately no longer with us. Based, as it is, upon such experience and practice, it lays down definite and distinct lines of teaching that admit of no ambiguity, combining the useful features of conciseness and detail, so that the reader is able to gather definite information without undue expenditure of time and trouble. The present edition has a human interest attaching to it, in that during its preparation Dr. Bidwell was taken away. After his lamented death the work of revision was continued by Mr. Percy Dunn, but we are assured that all of the essential work had been done by the author before death halted his hand.

WARFIELD'S "ARTERIOSCLEROSIS"

Arteriosclerosis: Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis, and Treatment. With a Special Chapter on Blood Pressure. By Louis M. Warfield, A. B., M. D., with an Introduction by W. S. Thayer, M. D. Illustrated with 28 engravings. St. Louis: The C. V. Mosby Company. 1912. Price $2.50.

We cannot truthfully aver that this monograph adds anything of real substance to our knowledge of the subject of which it treats. Indeed, in the ordinarily accepted sense of the term, it cannot properly be called a monograph at all, for we commonly understand a monograph to represent original research-work of its author, while this treatise contains nothing but a compilation of existing literature. However, we hasten to say that it is a very able and complete compilation, and presents the subject in a more sequential and satisfying fashion than we have ever seen it presented elsewhere.

The chapter on the physiology of the circulation and of blood pressure is particularly full and adequate, constituting, in our judgment, the most valuable feature of the book. One would have to do a great deal of scattered reading and sifting in order to unearth what is here set out for him in concise and discriminate form. We fear, though, that we must criticize the section on treatment as being somewhat trite and stereotyped. We never could agree with those who regard the lowering of blood pressure as the first and most obvious step in the treatment of arteriosclerosis. This measure does not appeal to us theoretically, nor has it ever given us anything but disastrous results clinically. We would much rather have had Dr. Warfield's actual and honest personal experiences than the mere recitation of current cut-and-dried teaching upon this and various other points.

RATCHFORD: "DISEASES OF CHILDREN"

Diseases of Children. By Benjamin Knox Ratchford, professor of diseases of children, Miami Medical College; Department of Medicine, University of Cincinnati. New York and London: Appleton & Co.

In the reviewer's estimation, this is one of the most practical and helpful of the many recently published volumes devoted to pediatrics. The author evidently has written for the general practician and has avoided unnecessary etiological considerations and vague theorizing, in order to consider more fully differential diagnosis and rational therapeutic procedures. He recognizes and points out the fact that the undeveloped organism of

the child, because of its physiological peculiarities, reacts to the same pathological factors very differently from the adult.

It is to be regretted that Ratchford—advanced as many of his ideas are—still advocates such uncertain remedial agents as paregoric, syrup of ipecac, chalk-mixture, nux vomica, etc. Why the pediatrist, especially, should call to aid unpleasant preparations of unknown potency, when codeine, monobromated camphor. emetine, strychnine, and brucine are available in definite dosage is beyond comprehension. Ratchford repeatedly calls attention to the necessity for "cleansing the intestinal tract," but seems to be an ardent admirer of castor oil, frequently recommending it, rather than saline, after calomel. As a whole, however, his drug-therapy is eminently satisfactory, and he is to be especially complimented upon the thoroughness with which dietetic and hygienic treatments are outlined.

The book contains 6 excellent colored plates, and original illustrations have been supplied wherever they seemed essential to a clear conception of the subject under consideration. The young physician desiring a single volume on the diseases of children will make no error in selecting Ratchford; and the successful pediatrist, no matter how extensive his library, will find much to interest him in the individual views of the author.

G. H. C.

CULBERTSON: "DOCTORS AND THE LAW"

Medical Men and the Law. A modern treatise on the legal rights and duties and liabilities of physicians and surgeons. By Hugh Emmett Culbertson, of the Ohio and New York bars; contributing editor to the Laning Ohio, "Encyclopedic Digest," and of many other legal publications. Philadelphia and New York: Lea & Febiger, 1913. Price $3.00.

We have often and often wondered why somebody did not write just such a book as this, judging from first impressions, appears to be. Voluminous and learned treatises there were aplenty on what their authors were pleased pompously to call "medical jurisprudence," which, so far as our own perusal of them went, consisted for the most part of obscure and difficult principles of law applied to equally obscure and difficult instances, drawn from the experience of medico-legal experts (and usually of very ancient date, at that); but no one seemed to think of writing a plain, simple book of guidance for the average general practitioner, in his day-to-day work, concerning his workaday relations with the law. But this is precisely what Mr. Culbertson has done, and both he and his publishers are to be congratulated and thanked for putting a book of this kind into our hands.

The general physician is wofully ignorant of his rights, and obligations, and liabilities at law; yet, he never knows at what moment he may be called upon to assert or to answer for them, and when he is, he will find, as every man finds, that ignorance of the law is no excuse. He ought thoroughly to inform himself upon these very simple but vital matters; and he can do so in no better fashion than by a perusal of, and constant reference to, Mr. Culbertson's excellent treatise.

BULKLEY: "DIET IN SKIN DISEASES"

Diet and Hygiene in Diseases of the Skin. By L. Duncan Bulkley, A. M., M. D., physician to the New York Skin and Cancer Hospital; consulting physician to the New York Hospital, etc. New York: Paul B. Hoeber. 1913. Price $2.00.

This book is one of a series by the same author on various aspects of skin diseases, all of which reflect the modern view of diseases of the skin being expressions of underlying metabolic disorders. The day has gone by when the dermatologist was a mere dabbler in lotions and ointments. Today dermatology is considerably more than skin-deep; for this branch of the remedial art ramifies into every function and habit of the body—even of the mind—and concerns itself with the body-chemistry, the tissue functions, and the nervous discharges, all of which go to make up the larger physiology and pathology and in the effects of which the skin shares in common with every other organ. Indeed, the skin, being an epithelial end-organ, can hardly fail to react promptly and profoundly to any and every deviation from the normal which occurs in the body-processes,; and it is an intelligent recognition of this relationship between them which distinguishes the new dermatology from the old; and this makes itself manifest all through these valuable monographs from the experience and observation of Dr. Bulkley.

Most of the contents of this and of the other books of this series have previously appeared in current medical journals, but none the less do we welcome their assemblage and dovetailing into a whole and permanent piece of

medical literature. Diseases of the skin usually are more or less of a bugbear to the average physician; but he shall find in these monographs much that will make the dark places light, and take away the curse from the study and practice of dermatology.

ALLEN: "VACCINE THERAPY"

Vaccine Therapy: Its Theory and Practice. By R. W. Allen, M. D., B. S.; late clinical pathologist to the Mount Vernon Hospital for Diseases of the Chest; late pathologist to the Royal Eye Hospital; late Gull Student of Pathology, Guy's Hospital. Fourth edition. Philadelphia: P. Blakiston's Son & Co. 1913. Price $3.00.

This work, in our opinion, is easily the most lucid and practical exposition of the subject of vaccine therapy that thus far has appeared—doubtless because it comes from the pen of a man who himself is unquestionably the ablest exponent both of the theory and the practice of vaccine therapy in England, if not in the world. At all events, Dr. Allen is undoubtedly the best living authority on the clinical aspect of the subject, and it is this phase of the matter which dominates in his book.

Here, in this book, will be found, simmered down into practical, usable form, the entire status of the entire theory and practice of vaccine therapy, down to the present day, all set forth in clear and simple style, so that the general practitioner may share with the specialist a working-knowledge of this important branch of modern medicine. Vaccine therapy is destined to occupy a large place in the medicine of the immediate future, and the physician who would keep abreast of the times will do well to equip himself with a copy of this excellent little book of Dr. Allen's.

HENRY: "THE PLANT-ALKALOIDS"

The Plant-Alkaloids. By Thomas Anderson Henry, D. Sc., F. C. S. Philadelphia: P. Blakiston's Son & Co. Price $5.00.

The arrangement of this work is analogous to that adopted both by Pictet and Wolffenstein and by Bruhl in their respective treatises bearing the title "Die Pflanzenalkaloide. However, the present work by Henry has the decided advantage that it is just off the press, and in that way could have incorporated in it the latest word, in this field, of modern science.

One is surprised at the wide scope of this work. The author has covered not only the more generally known alkaloids, but has included the very rare plant-principles as well. We are pleased, also, to find that a very extended list of original references has been given. The book is absolutely up to date, including work published as late as 1912.

While this book treats mostly the chemical aspect of the alkaloids, their constitution, cleavage-products, and so on, there will be found, in addition, much interesting historical information, as well as data relative to the mode of manufacture. We are sure that this work will prove a valuable addition to the libraries of all progressive doctors, no less than of pharmacists and chemists. Hence, we take pleasure in recommending this work, the more so, as it is the first one we know of that so thoroughly covers the field of the plant alkaloids.

EVANS: "DISEASES OF THE SKIN"

The Diseases of the Skin. By Wilmott Evans, M. D., B. S., surgeon to the Royal Free Hospital and to the Skin-Department of the Royal Free Hospital; senior surgeon to the Hospital for Diseases of the Skin, Blackfriars. With 32 illustrations. London: University of London Press. 1913. Price $3.75.

Here is another book on diseases of the skin—this time by an Englishman—and if we might be permitted to offer a criticism we should say that it fails in not taking count of the aspect of the subject the recognition of which made Dr. Bulkley's work so conspicuously illumining, namely, the relationship subsisting between skin-disorders and metabolic derangement. However, as the author expressly declares in his preface that the object of the book is principally descriptive, perhaps our criticism is a little bit overdrawn. Certainly, from the descriptive standpoint, Dr. Evans's book leaves nothing to be desired, for a small manual.

Both the text and the illustrations give an exceedingly clear and unmistakable picture of the various dermal lesions, all in a very limited and modest scope. The author is quite right in citing as a reason for the general unsatisfactory state of knowledge upon dermatology the too great exhaustiveness of most of the current treatises upon the subject; and a descriptive manual written in as simple a style as is compatible with correctness will fill a useful place. Needless to say that the "correctness" is attained in Dr. Evans's writing.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERIES

ANSWER TO QUERY 5848.—"Wood, Not Worms." A correspondent, Dr. A. B. Sweet, of Frederick, Oklahoma, suggests that the wood-fiber found in the stools of the stools of the patient whose case was mentioned in Query 5848 are probably slivers of snuff-sticks. More than likely the doctor is right.

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ANSWER TO QUERY 5910.—"Alopecia." Messrs. Knoll & Co. request us to print the following comment, abstracted from the *J. A. M. A.*: Chas. J. White, of Boston, professor of dermatology of Harvard University, states, in a paper read at the meeting of the American Medical Association in St. Louis, that he has observed 794 cases of alopecia and seborrhea. He finds that women are more often affected than men, and discusses the possible etiological factors in alopecia simplex and seborrhoeica, the age of the patients affected for the first time, and, finally, the treatment of alopecia seborrhoeica. Besides lotions, he mentions ointments, soaps, internal medication, and massage. The best results were obtained, however, with the following prescription:

Hydrarg. chlor. corros.....grs. 4
Euresol pro cap.....drs. 2
Spirit. formicarum..... fl. oz. 1
Ol. ricini.....fl.dr. 1 to fl.drs. 3
Spirit., q. s. ad.....fl. ozs. 3

M. S.: Wash for scalp. (Poison.) Apply in the morning.

The active ingredient of the formula is euresol, the monoacetate of resorcin. With this, the author obtained gratifying results in many, almost impossible, cases. He also gives statistics of the results of his treatment, arranged according to the age. His article, finally, contains a few remarks on seborrhea, and mentions the parts of the scalp which are especially prone to show alopecia areata and herpes tonsurans vesiculosus. In the discussion of White's paper, Dr. Wm. C. Roop, of Dayton, laid stress upon the exceptionally good results obtained with euresol in seborrheic affections. Dr. J. B. Kessler, of Iowa City, has also been very well satisfied with euresol.

QUERIES

QUERY 5918.—"Freckles." G. S. S., Texas, being peculiarly "interested in freckles, wishes to learn more about them—their *raison d'être*, especially of those deep-brown blotches on the face, and what will destroy this pigmentation of the skin. In the case he has in mind, this blemish is a family characteristic, every one of the three daughters having them on the face, yet not another spot elsewhere.

The following is an excellent lotion for freckles: Zinc sulphocarbolate, 1 dram; glycerin, 1 ounce; rose-water, 3 ounces. Apply to the spots night and morning, after bathing the skin with a solution prepared as follows: Into an enameled vessel place 2 handfuls of wheat-bran and 3 pints of water; cover, then allow to simmer for an hour, strain, and make up to 3 pints by adding boiled (or better, distilled) water. To this decoction add 1 ounce of magnesium sulphate, 1 ounce of glycerin, and 4 ounces of rose-water. Of course, plain sterile water, perfumed to suit may be used in place of the rose-water.

Excellent results have been secured by using the bran-decoction in the morning and the zinc-sulphocarbolate and glycerin lotion at night.

Here is another formula which has been thoroughly tried: Ammoniated mercury, 1 dram; bismuth subnitrate, 1 dram; glycerin of starch, 1-2 ounce. Apply to the freckles every other day. If there are only a few freckles, touch them with full-strength solution of hydrogen dioxide, twice daily; the liquid being suitably applied by means of cotton wrapped around the end of a toothpick.

The young women you mention should be carefully dieted. Be sure to keep their bowels freely open. Watch their urine carefully.

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QUERY 5919.—"Edema Angioneurotica." W. J. L., Kansas, describes briefly "an all-prevalent trouble" in that region as "a malignant edema or fibrous condition of the adipose tissue and superficial faciæ, showing prominently in all patients of from twelve to thirty-five years of age." The condition, he says, "starts just above the shoe-tops and up, according to age, and on the upper outer part of the arms, at the top of the spine (a ridge crosswise), on the face, thighs, and, in fact, in the chronic cases, anywhere over the body. The treatment has been massage, dry hot air baths, electricity used with baths—galvanic for chemical effect and faradic for tonic effect; also stimulation of all eliminating organs." We are asked to "give the cause and cure." The books available to our correspondent touch but lightly upon the subject.

We are extremely interested in the few facts you present. You say, "An all-prevalent trouble in this part which is known as 'malignant edema'." Now, malignant edema proper is anthrax. This form of infection by the bacillus anthracis, occurring in the eyelids, head, hands, and arms, is characterized by the absence of papules and vesicles. The edema is extensive and may reach such a degree of intensity that gangrene results. Constitutional symptoms then become extremely grave and the attack invariably proves fatal. For this reason, we are inclined to think that you are not dealing with malignant edema; in fact, it scarcely is possible that so many instances of wool-sorter's disease (anthrax) would be observed in a given locality, unless, indeed, some peculiar condition obtained; that is, that sorting of hides or handling of skins, hair, etc., are one of the chief occupations of the community.

Unfortunately, you did not give us a clear-enough idea of that pathologic conditions to enable us to arrive at a positive diagnosis, but we take it that the trouble is angioneurotic edema, or acute noninflammatory edema, known as Quincke's disease and as edematous urticaria. This affection is met with in both sexes and at all ages, being probably most frequent in early youth and middle life. Its manifestations are closely allied to those of urticaria. Sometimes subjective symptoms and evidences of an urticarial character are absent. Strangely enough, a family predisposition seems to exist, Osler elicited a history of its occurrence in five successive generations.

Acute circumscribed edema is a vasomotor neurosis, probably due to some disturbance in the central nervous system. The theory has been advanced that the presence in the blood of a lymphogogue in pathological quantity, and rapid rise of lymph pressure produces, in areas of lessened resistance, a sudden vasomotor paralysis.

Heidenhain finds that various substances (egg-albumin, emulsion of shellfish, sugars, etc.) injected into the circulation increase the flow of lymph. Inasmuch as circumscribed edema—giant and simple urticarial eruptions—often appear in individuals whose digestion is disturbed or who have partaken of certain articles of food prone to develop gastric or intestinal toxins, Haidenhain's argument would seem to be well grounded. In some of these cases there is more or less systemic disturbance or evidence of auto-intoxication, individuals not infrequently complaining of malaise and depression preceding the attack. Albuminuria has been observed prior to the appearance of edematous areas; which latter usually appear suddenly and may disappear just as rapidly, or last for several hours or even days, gradually melting away. Swellings elsewhere may then occur and persist for hours or days or exceptionally for months. Graham tells of a patient who scarcely was free from these swellings for any length of time during a year.

The subjective symptoms are itching, burning, more or less tension, and feeling of stiffness in part. Slight elevation of the surface temperature has been noted; then, also, there may be a decided reduction. The nose, lips, ear-lobes, eye-lids, and extremities are most often affected; occasionally the tongue and glottis suffer. In the latter case, death

may result from asphyxiation. The swelling may have the normal color of the skin, or appear pale, pinkish, or even reddish; it is hard, does not pit on pressure; as a rule but one part of the body is affected at a given time, although sometimes several lesions may appear simultaneously or one after another.

It would be interesting to know whether your various patients have recently procured and eaten canned goods (especially fish) secured from a common source. As a matter of fact, this trouble is a somewhat rare and decidedly peculiar one, and there must be an explanation for its prevalence in your neighborhood. Butler says that "the disease appears most often in the winter or early spring months," and he believes males are affected more often than females. He names, as the exciting causes, fright, anxiety, grief, sudden exposure to cold, and the ingestion of certain foods.

The essential diagnostic points are, the sudden appearance of edema, the absence of pain, and the recurrence of the swelling at intervals.

The prognosis usually is good, the malady being a benign, though often a troublesome one. Much will depend upon the patient's mode of living, freedom from nervous disturbances, and strict attention to his diet.

Blue-mass and soda, and podophyllin and bilein, half-hourly for four doses, every other night for a week, in connection with a saline laxative draught the next morning on rising; sodium salicylate, 2 1-2 grains, and the combined sulphocarbolates, 5 grains, alternated, every three hours; and the arsenates of iron, quinine and strychnine after meals, would, in our opinion, prove promptly remedial. The body should be sponged with epsom-salt solution (1 ounce to 3 pints of water) each night on retiring. Diet should be very carefully regulated; fruits, vegetables and cereals being given freely, with buttermilk or milk and Seltzer water to drink. Fruit-juices also are allowable. Meat, eggs, and fish (especially shellfish) should be prohibited.

You must remember that peculiar forms of edema are occasionally observed in hysteria. Charcot's, or "blue," edema is limited to the neighborhood of the joints, as a rule; the hands and forearms, especially upon one side, may be affected. Not rarely it affects the upper arm and leg. Other symptoms of hysteria, such as regional paralysis, contractures, and anesthetic, aesthetic or hyperesthetic areas are frequently observed. Some times it appears gradually, sometimes acutely. The course may be chronic. As with most hysterical manifestations, however, it may disappear under psychical influences. It is generally supposed that "blue" edema is the result of vasomotor spasm. But it does not seem possible that hysterical edema could be a "prevalent malady" in a circumscribed district, although we must remember that local outbursts of hysteria and other psychoses are on record.

We would ask you to secure a specimen of the urine from say, two of your patients and forward them to our pathologist for examination. At the same time investigate conditions thoroughly and report results for the benefit of the profession.

Points of particular interest are: number of patients reported within six months; their average age; sex; occupation; prior history; diet; area first involved, with description; number of lesions present in an individual at one time; general systemic conditions prior to and during the existence of the edema; length of time the lesions persisted; whether there has been a recurrence. In fact, give all the information you possibly can; for, as already stated, you seem to be in the presence of a most unusual and extremely interesting phenomenon.

QUERY 5920.—"Drugs Facilitating Labor." A. V. C., Pennsylvania, desires information as to the "best remedies for facilitating labor —especially to hasten a slow delivery."

You will readily understand, doctor, that the selection of drugs in such cases will depend entirely upon the conditions present. For instance, uterine inertia yields, as a rule, to a full dose of quinine; knifeblade rigidity of the os, to lobeloid and caulophylloid. The latter drug is also an excellent *partus preparator*, and should be given, where there is a history of slow or difficult labor, two or three times a day for the last two months of pregnancy.

Aletroid in full doses may be given with caulophylloid, both drugs relieving false pains and coordinating contractions.

Macrotoid facilitates labor by relaxing the tissues of the perineum and cervix uteri; also synergizes the efforts of the uterus. It may, therefore, be rationally stated that caulophylloid and aletroid, with or without viburnoid, should be given to insure steady and painless parturition. Caulophylloid and lobeloid should be thought of if undue rigidity of the maternal parts retards the advancing head. Glonoin with macrotoid sometimes is a promptly acting uterine tonic if the pains cease.

In this connection we reproduce an answer to a Query 5822, "Caulophylloid and Painless Parturition":

"Caulophylloid is a concentration from blue cohosh, or caulophyllum thalictroides. The average dose is from 1-6 to 1 grain. It is generally necessary to continue the drug over a considerable period of time in order to secure definite results.

"While we do not understand fully the physiologic action of caulophylloid, we do know that it possesses antispasmodic, diaphoretic, and diuretic properties; moreover, it is a remarkable *partus preparator*, and, if taken for some time prior to confinement, undoubtedly facilitates labor.

"Ellingwood, in his 'Materia Medica and Therapeutics,' says that 'the growth of the fetus has been compared to an apple, which, when fully ripened, falls from the tree.' The effect of caulophylloid is to prolong gestation until the fetus is fully developed. Labor being the physiologic process at full term, and not pathologic, is, therefore, less protracted, less painful, and accidents are less liable to happen.

"Halo, who has studied the drug carefully, states that women receiving caulophylloid may overrun their time ten or twelve days, yet, invariably have easy labors and make good recoveries. Candler, in a paper upon 'Caulophylloid as a Remedy for Rigid Os,' recommends the use of 1-3 of a grain of the drug three times daily for the last three months of pregnancy.

"Viburnoid may advantageously be added in cases where uterine inertia or rigidity of the cervix has been observed at previous deliveries. A rigid os yields promptly to caulophylloid, especially the knifeblade variety; that is, the resistant ring which, by preventing the descent of the head, prolongs labor and wears out the parturient woman. In these circumstances, 1-3 of a grain may be given, with a little hot water, every ten or fifteen minutes until three or four doses have been taken. If immediate results are desired, lobeloid, 1 or 2 granules, may also be given. False pains of the spasmodic type, hourglass contraction and spurious labor-pains are relieved by caulophylloid.

"In threatened abortion, caulophylloid frequently proves useful, relieving the irritation upon which the trouble depends. Uterine tenderness and pain due to congestion, ovarian and mammary irritation and some forms of ovarian neuralgia yield to full doses of caulophylloid. In amenorrhea in young girls, anemonine and caulophylloid should be alternated, the triple arsenates with nuclein being added for tonic effect."

QUERY 5921.—"Excision of Cervix." I. R. P., Mississippi, asks for data regarding a" few obstetrical cases of excision of the cervix uteri," and who performed these operations.

Excision, or amputation, of the neck of the womb is frequently done, the necessary operative procedures being fully described in any recent work on surgery, among which Keen's "Surgery," Vol. V, or Mulford's "Practice of Surgery" may be mentioned, for instance.

The double-flap or single-flap method may be employed. The latter, known as Schroeder's operation, is the one most frequently chosen in lacerated cervix.

In acquired atresia, the indications are not, of course, for excision, but to remove the obstruction, keep the canal patulous, and relieve the complications.

Not infrequently only divulsion is necessary, a light or heavy dilator being passed into the canal until the tip of the blades meets the obstruction. Then the cavity is forcibly dilated (the operator using his right hand to manipulate the dilator, and steadying the cervix by the bullet-forceps held in the left hand). The cervix, of course, should be pulled well down toward the vulval orifice and some suitable stimulant be deposited in the vagina.

When the obstruction can be seen, it is incised with a straight bistoury and the cervical canal stretched. If the obstruction is high up and cannot be overcome by divulsion alone, it should be punctured by a sharp bustoury, and then the dilator used. Great care must be taken to keep the blade of the bistoury in the line of the canal, otherwise it may enter the walls of the cervix and injure the adjacent structures.

Diagnosis of malignant disease of the cervix uteri is readily made, of course, by inspection through a speculum. If the entire cervix is affected, there will be little or no dilatation; but, if the disease is in an early stage, dilatation may proceed as usual. The necessary dilatation may be obtained by introducing hydrostatic dilators, or by deep incision of the cervix as recommended by Dukrrsen. This procedure, however, is open to the objection that it may favor the dissemination of the growth. Hysterectomy should be performed as soon subsequently as is possible.

Delivery by cesarean section is the only procedure that can be adopted in cases where the disease is far advanced. If there is a

prospect of being able to remove the entire growth, delivery of the fetus should be followed by abdominal or vaginal hysterectomy.

Incision, single or multiple, of the cervix is a simple procedure, and, as already stated, is described in any modern work on obstetrics and surgery. Excision of the cervix would seem to us to be uncalled for as an obstetrical procedure. Perhaps, with the aid of a little more explicit information, we might be able to extend more definite information.

QUERY 5922.—"Supposed Goiter in Newborn." J. E. H., Michigan, writes about a woman recently delivered of a 10-pound child which was normal in every way and well proportioned, except that it had a very large goiter or a much enlarged thyroid gland that nearly choked it to death. The mother has always been healthy, but has a goiter of moderate size, which dates from her first pregnancy, three years ago, when a boy was born; the latter always having been well and who never has had a goiter. The mother has been very much troubled with extensive varicose veins on both legs during this pregnancy and to some extent in the first.

Our correspondent remarks that he has never seen such a case in twenty-four years of active practice, and asks whether it is not of very infrequent occurrence; also, what likely is the most important etiologic factor, what the prognosis, and what the safest and best treatment. "It may be possible," he adds, "that the physician who told him of this instance has mistaken an enlarged thymus for an enlarged thyroid gland; yet, even so, please give prognosis and treatment in the latter case."

Are you aware, doctor, that the functions of the thymus gland are not definitely known? However, it is subject to atrophy and hypertrophy. Normally it grows rapidly from birth till the second year, then more slowly till thirty, when it begins to shrivel. In acromegaly, leukemia, Hodgkin's disease, Graves's disease, and sometimes in epilepsy, the thymus is hypertrophied. Sudden death may accompany great enlargement; and a seemingly perfectly healthy child with enlarged thymus may die suddenly, without warning. Occasionally a slight cyanosis is noted for a short time prior to death. Intrathoracic pressure may cause asthma. Edema often occurs.

The treatment of hypertrophic thymus is surgical; it must be removed. In some cases, calx iodata, gr. 1-3; potassium iodide, gr. 1-3; and phytolaccoid, gr. 1-6, three times a day, may be given in alternation with some active preparation of the adrenal glands. Iodine, followed by magnesium-sulphate solution on compresses and galvanism, is the external treatment.

Simple goiter (bronchocele) usually yields to rational treatment in two to three months.

Syphilitic gummata and tuberculosis have been found in rare instances. Malignant disease involving the thyroid gland has been reported among infantile disorders.

It is very unusual for a child to be born with an enlarged thyroid gland; it is desirable, therefore, to make a definite diagnosis before instituting treatment. We suggest that you make a careful examination of the child, should it live until you see it, and describe conditions minutely. We shall then be in a position to aid you intelligently.

QUERY 5923.—"Veratrine vs. Veratrum." J. E. S., Texas, recently had to treat a puerperal eclampsia and controlled the convulsions with tincture of veratrum viride administered subcutaneously. He would have liked to use veratrine instead, but did not know in what relative proportion. Our correspondent finds the tincture too irritating, leaving the site of puncture sore and painful for some time after recovery. The doses of the tincture administered ran from 3 to 20 minims, and the Doctor states that, in his own experience, from 40 to 120 minims, all told, always sufficed to control the trouble.

"As there is nothing so pleasant," he continues, "as to have remedies that can absolutely be depended upon, please, tell me what will be the corresponding dose or what amount of veratrine can be absolutely depended upon to relax the spastic muscles, open up the emunctories, lower arterial tension, and completely stop convulsions, without having to resort to the irrational opiates and other sedatives. Does veratrine slow the pulse to the same extent as does the tincture of veratrum viride? It is the slow pulse what I always aim to secure, regardless of the amount that has to be given under the circumstances."

In reply, we can only repeat what has so often been pointed out in these columns, namely, that it is not possible to compare an indefinite substance with something definite. Tinctures of veratrum viride—the various lots made, sold, and dispensed—varies materially in their content of the active principles; whereas veratrine, especially the soluble hydrochloride (representing the salts of the mixed alkaloids from the seeds of

asagræa officinalis), is an evenly potent and a comparatively nonirritant substance.

In puerperal eclampsia, 1-64 grain of the veratrine hydrochloride should be given hypodermically every hour, or even oftener until the convulsions cease or vomiting ensues. Administered in small doses, veratrine reduces tension of the arterioles, thus relieving the heart of part of its work—but does not materially reduce the pulse rate; in full doses (by mouth or hypodermatically), it decreases the rate of the pulse and renders it soft and compressible. Any given beneficial effect to be secured from any stated quantity of a tincture of veratrum viride can be obtained from 2-64 to 3-64 of a grain of veratrine hydrochloride. Thus, for instance, three 20-minim or six 10-minim doses of a certain tincture of veratrum viride, may suffice in a particular case; then it is probable that one single injection of a 1-64-grain dose of veratrine hydrochloride would produce the same results.

You say, doctor, that in your experience from 40 to 120 minims of the tincture may be required. This simply means that two, three or even four 1-64 of a grain of veratrine hydrochloride might possibly have to be given; however, one thing you may be sure of—the amount you will have to use of the alkaloid will be less than you would have to give of the best tincture available. Then, also, you will not have the same irritant effect. Moreover, you will *know*, positively, the amount of *active* drug you have exhibited; while, when using a tincture, you can only say that you have given so many drops of it—you do not know how much of the active virtues you have administered. In eclampsia, time is of importance, and the use of definite agents most essential.

In this connection, we want to call your attention to the desirability of alternating lobeline sulphate and veratrine. Lobeline sulphate being a nonirritant, powerful relaxant, acting synergistically with veratrine.

Bear in mind, doctor, that the standard dosimetric granule represents the *ordinary* effective dose. It is not possible to say just how much of the drug will be required in any given case; but, if you will administer this small, evenly effective dose at brief intervals until you get its effect—remedial or physiological—you cannot err, can not overdose, while, as we already have pointed out, you *do know* that every dose you have given represents the best available form in which the medicine can be administered.

Query 5924.—"Hydrocephalus." E.W.S., Oklahoma, has under treatment a hydrocephalic baby, three months old, whose head is enlarging rapidly, the eyes now beginning to show symptoms. Our correspondent, some time ago, read of a country doctor who cured the disease "while you wait," as it were. "All you have to do is, to turn the sun's rays on the child's head and, maybe, 'press the button,'" he writes. "I don't remember this wise man's address, so write to you instead of to him directly. Probably he wouldn't tell me, anyway, how he does it, if I were to write and ask him. Is there a cure for hydrocephalus?"

We were not aware that hydrocephalus could be cured, even by the sun's rays, controlled by a button, "while you wait." As we need not tell you, aspiration of the cranial fluid has been tried, but without really satisfactory results. Iodoform-collodion has been praised by some pediatrists, but is no longer recommended. Blistering, counterirritation, strapping, and lumbar puncture have all been tried by competent men, with no apparent success. Mercurial inunctions and large doses of iodides are most likely to prove effective. If syphilis is at the foundation, benefit may be expected from specific treatment.

One thing, external hydrocephalus must be differentiated from the internal; the latter condition (serum being in the ventricles of the brain) being most commonly seen. Also, the condition must not be confounded with tuberculous meningitis.

The first symptoms that attract attention are: the gradual increase in the size of the head; forehead is high; fontanels are distended and bulging; sutures are wide apart; pupils are enlarged usually; although sometimes contracted; convulsions frequently are present. While the child's head enlarges, the body emaciates.

The disease usually terminates fatally, at about the seventh year, although in rare instances the condition exists through life, the mental faculties invariably being more or less impaired.

Fisher, in his "Diseases of Infancy and Childhood," states emphatically that reported cures should be viewed with suspicion. "Look for tuberculous or syhpilitic taint in parents and formulate your treatment accordingly." Another author dismisses the subject with this paragraph: "The life of the child is not to be valued. If the condition can be detected at birth, craniotomy should be performed."

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Let Us Get Right Down to Business

THERE is one false note in our professional life that I desire to bring to your attention, dear reader. I refer to the pretense that the business side of the practice of medicine is something contemptible, and that it should not be referred to overly much in our journals nor discussed openly with our patients. We prate much of the humanities; we devote pages and pages to professional self-praise; and we try to impress upon the public that the medical man is living a life of heroic self-sacrifice. Can we complain, then, if the public takes us at our word and makes our voluntary sacrificial immolation more convenient by multiplying charities calculated to take from us the opportunities to earn a reasonable amount of money?

Let us get right down to business in this matter of the physician's right to earn a decent living. Let us be fair and square, and open and aboveboard. Some men enter the practice of medicine because they love it; others do so because they believe it opens for them the line of least resistance toward success, whether expressed in money or honor; yet practically all must look upon it, once they are safely launched upon the rough sea of medical life, as an honorable means of acquiring a competence. *The doctor's income is the keystone in his professional career.* Why should we be ashamed to admit this fact? Why do we hesitate to discuss the reasons why so many of us are failing "to make ends meet," as undoubtedly is the case?

It is because we believe this business side is of vital importance that some ti ne ago we decided to make a special study of its problems in these pages. Other journals have given them little attention. About the only topics of a character affecting the practitioner's pocket book much discussed in our journals or at our society meetings have been these: the fee-splitting evil, which has been written about mainly from the standpoint of the city specialist; the regulation of nostrums, the discussion of which centers around the activities of the Council on Pharmacy and Chemistry; the regulation and suppression of medical colleges, principally promoted by the Council on Education of the American Medical Association; and the doctor's investments, so ably presented by the editor of *The Medical World*.

While the preceding problems are all important, they do not so vitally concern the general practitioner as a number of others of an economic character to which I shall invite your attention in succeeding issues of CLINICAL MEDICINE. Some of these problems seem to me of the greatest significance, since they undoubtedly are evidences that we are entering the incubation-period of a serious class-struggle affecting us deeply, and the outcome of which will determine the economic integrity as well as the intellectual freedom of the doctor of the next generation.

In order to get some information at first hand concerning conditions in the field, I mailed, some months ago, to several hundred physicians a letter propounding a number of questions that I believed of interest to the profession. These letters were addressed to men whose names were picked at random from the A. M. A. Medical Directory.

I received 126 replies from thirty states and the District of Columbia, every section of the country being represented. Forty-two of these letters came from the larger cities; 84 from small cities, villages and rural communities. While the number of replies is not large enough to warrant many deductions that may be of value, nevertheless the opinions given were most interesting.

For instance, I asked: "What is the average income of the physicians with whom you are sufficiently acquainted to give accurate information?"

The answers to this question were somewhat surprising.

It has been repeatedly stated (on whose authority I do not know) that the average income of the American physician is about $700 a year. My correspondents told a different story. The incomes reported ran all the way from $500 to $25,000 a year; yet, only three men reported less than $1000 a year, and two of these lived in Oklahoma. One country practitioner from that state reported $500, evidently his personal income; his community had been almost ruined by a succession of dry seasons.

The average of the incomes reported, excluding some two or three which ran above $15,000, was (accepting the minimum figures given) $2340 a year. It may be that this average is high. One physician, who declined to answer this question, said: "We are such cheerful liars that I couldn't even guess." Perhaps his hypothesis explains the result of the straw-vote. However, if we exclude the young men just out of college and the superannuated physicians and those retired from practice, I am personally convinced the figures are not far out of the way.

This record, however, should be qualified to a certain degree. It is not save to assume that an income of $2000 or more annually means prosperity, for *70 percent of those reporting also testified that their incomes had either decreased or were stationery*; and of the 30 percent reporting an increase during the last decade the majority took occasion to point out that their expenditures had increased as rapidly or even more rapidly than their incomes.

The physician who wishes to "stay in the game" nowadays is compelled to buy books, subscribe for magazines, purchase instruments and apparatus, keep up an expensive office, install a telephone, join the clubs and societies, subscribe to the charities, and run an automobile. These expenditures can be depended upon to wipe out any surplus.

The significant point in all this is, that the tendency of the doctor's net income is downward, not upward, in spite of the restraint already being placed upon competition. And this brings me again to the purpose of this article, which is, to insist that it is time that we began to put brains, and energy, and determination to do something practical, into the great question now presenting itself to us all:

How shall we maintain the economic integrity of the doctor?

We are going to open up this great subject and discuss it from a number of angles. We are going to invite some able men, men who have given the matter thought, to submit their opinions upon its various phases; and we want you—*you* the reader of this—to participate in the discussion. To get right down to the heart of the situation, let us try to help one another to answer this question:

"*How can I (through honorable service) increase my income?*

We will try to direct this discussion from month to month through the editorial pages. Every issue of THE CLINIC will contain something upon this subject. Among the topics that we shall take up there will be: "The Doctor's Fees;" "Accounts and Collections;" "What Shall I Do with the Dead Beat?" "Competition or Cooperation?" "Medical Partnerships;" "Dealing with the Hospital and Dispensary;" "Lodge- and Contract-Practice;" "My Relations with the Druggist;" "Business Education for Business Doctors;" "Legitimate Publicity;" "Education—and More Education;" "How I May Fit Myself for Specialty Work—at Home;" "Fitting Up an Office;" "Laboratory Aids to Success;" "Dobbin—or a Car?" "Politics in Medicine and Medical Politics;" "Organized Effort for the Common Good;" "Legislation Affecting the Doctor's Interests."

These are a few of the topics that occur to us now. Be thinking about them—and *be thinking about your own business troubles.*

In this series of articles and editorials, which we desire to make a leading feature of CLINICAL MEDICINE for the coming year, we desire to help you find the solution for your difficulties. Somehow we feel that no other medical journal in the field stands as close to its readers as does our own; and the reason for this is that we sincerely and deeply feel for and sympathize with every man who opens his heart to us, and we earnestly try to help him whenever it is within our power.

But, we want to reach out farther, to touch the lives of others for their good—to increase

our own capacity for service. We can all of us do that, if we have the will. Let us try. This "program" represents a portion of our own effort.

The rising physician must be one who can resolutely withstand temptations to wander from the path of rectitude, ethics, altruism, morality. The practice of medicine should be conducted on a high professional plane.—The Medical World.

EMETINE IN DYSENTERY

Since the Portuguese discovered the little plant in use by the Indians of Brazil, ipecacuanha has been one of the most highly valued drugs in the materia medica. Its first notable application, curiously enough, was in the treatment of dysentery, the malady that, in one of its forms, has furnished the latest triumph of this drug. At the same time ipecac affords us in this particular application, another striking example of the possibilities of active-principle therapy.

Centuries have elapsed since King Louis was cured of his dysentery by ipecac. Many vicissitudes the remedy has seen since; lauded at one time to the skies as a priceless gem, and then, again, denounced as worthless. But in two directions patient investigators have been at work and their combined results have at last cleared away the uncertainties surrounding it, and established the truth.

In the tropics, dysentery is rife, and deadly. The physicians of India gave ipecacuanha and found large doses effective, provided they could be retained by the stomach. They succeeded fairly by administering the powdered root in dram-doses enclosed in capsules, these being swallowed without water, the patient being made to lie prone without stirring for half an hour, with sometimes a hypodermic morphine injection over the epigastrium. If the dose of ipecac was vomited, a similar one was administered immediately afterward, taking advantage of the period of exhaustion of the stomach's irritability following upon the exertion. If the drug was retained, the cure of the patient often followed. That very often the powders were not retained was shown by the further efforts necessitated.

Meantime chemistry had ascertained that the most important principle of ipecacuanha was an alkaloid, and this received the name emetine. Inasmuch as the drug cured dysentery, provided emesis did not occur, it naturally occurred to clinicians to extract the emetine from the root and administer the residue, ascribing the curative power to some other, unknown, principle in the substance.

The trials of deemetized ipecac were successful in part; this might be owing to imperfect extraction of the emetine, or else to the presence of the other ipecacuanha alkaloid, cephaeline. Our own experiments have shown that, while the latter principle is more acrid and disagreeable than emetine, the difference is not as great as the textbooks assert; while remedially they are not far apart. Still, the preponderence of bedside experience was so far against the deemetinized ipecac that further efforts were necessary in the search for the effective constituent.

In the meantime the pathologists had made a notable discovery; namely, that no single organism was responsible for the engendering of dysentery, but that at least two were capable of inducing acute infective coloproctitis. One of these belonged to the animal order, the ameba of dysentery; the other to the plant-world, the Shiga bacillus.

This recent discovery pointed to a reason for the failure of ipecacuanha in some instances, for experiments disclosed it to be effective especially in the ameboid form.

The next step in solving the riddle, was the final one, and the triumph was owing precisely to the application of our active-principle method—the pure alkaloid emetine was injected hypodermically and it proved a cure so certain and unfailing for ameboid dysentery as to have few parallels in drug medication. When there was apparent failure, the patient perishing in a relapse or from hepatic abscess, it was ascertained that the Shiga bacillus, associated with or following the attack of, the ameba, was the cause of the death. The amebas invariably were destroyed by full doses of emetine.

The establishment of this truth largely is the work of Rogers, of Calcutta, the brilliant therapeutist who already had demonstrated the cure of Asiatic cholera by means of intestinal antiseptics. Not only this, but Rogers had succeeded in having his results instantly accepted without question, without exciting the senseless, rabid opposition usually evoked by any approving word for this method or the better-known internal antiseptics.

This result he accomplished by astutely giving another name to the method and by using a new agent, the permanganate of calcium! Meanwhile hundreds of common, everyday American doctors had found the cure for dysenteries in the application of the "clean-out, clean-up and keep-clean" maxim,

by means of calomel and laxative salines, followed by the sulphocarbolates.

During its era of depression, ipecac survived, although it seemed to be limited to its applications as an emetic and expectorant.

Provided one secured ipecac "of good quality," "fresh," "active," it proved an effective mild emetic, acting nicely in children, and the drug obtained a firm hold in domestic medication. With the advent of emetine, however, all this uncertainty is past. We have learned to limit its use as an expectorant to the early stages of respiratory catarrhs, when emetine relaxes the vascular tension and hastens the mucous discharge, "loosening" the cough.

The value of ipecac as a means of inciting the secretion of digestive fluids is beyond computation. It is an incitant, not an excitant, when given correctly—that is, it induces healthy, normal secretions. In this respect its applications are so numerous as to render emetine one of our most used remedies, especially in the innumerable digestive maladies of children. In that long series of experiments in which the child, beginning by testing the edibility of everything it can get into its mouth, at last learns what is digestible, ipecac obviates many results of unsuccessful trials.

Out of this grew the use of emetine as a remedy for alcoholism, for which application of the alkaloid this writer is responsible. He observed that in certain cases of periodic drunkenness, for some days before the patient went on his spree his stools became acholic and offensive. A full dose of emetine (5 to 10 milligrams) cleared the alimentary canal and restored hepatic irritability, and the spree was prevented.

Since the alkaloid is applicable only in the condition above described, and these cases form but a small proportion of alcoholics, failure was certain when the remedy was applied indiscriminately. Under suitable circumstances it is as sure as it is in amebic dysentery.

But to return to the use of emetine in dysentery—be sure to read the record of experience recorded by Dr. Roemer, in his article published elsewhere in this number of CLINICAL MEDICINE. Not only does it show that we have in emetine a remedy of specific value in amebic dysentery, but it also shows that it may be given by the buccal as well as by the subcutaneous route with every hope of success.

There must be thousands of intractable cases of amebic dysentery in our own Southland. The exact diagnosis the clinical laboratory can easily determine. The cause once known, the possibility of cure no longer seems problematic.

It is one of the essentials to success that the physician should grasp every opportunity and make the most of it. If he would look upon every case he is called upon to treat as a problem to be solved he would find in it scientific work of absorbing interest, and it would bring more work every time.

ACCURACY OF DIAGNOSIS IS POSSIBLE FOR EVERY PHYSICIAN

Are you quite sure, dear general practitioner, everywhere, that you are living up to your privileges—not to say your obligations—in these days of modern advances in diagnostic methods? Do you avail yourself, to say nothing of giving your patients the benefit, as much as you might, of all the means that twentieth-century science has placed at your command for making a thorough and exhaustive diagnosis?

A very difficult matter, you say, for the general practitioner under average conditions. One can hardly expect the practicing physician, especially in small towns and rural districts, to maintain at his hand all the facilities and opportunities and paraphernalia for carrying out the rather complex procedures of clinical diagnosis as they prevail in these days of exacting precision. Some of these procedures, indeed, are virtually impossible of effective application except in a well-equipped clinical laboratory, such as one can scarcely expect a practicing physician to maintain, and under conditions of control such as are only to be attained in a well-conducted hospital or sanitarium.

All of which is true. But if its admission implies that the general practitioner, on the firing line, is to be cut off from practical participation in these diagnostic methods, then are they null and void and fail of the very purpose which they were intended to serve. And if it be true that practicing physicians throughout the country are cutting themselves off from a share in the advantages which modern diagnostic agencies afford, then it is time that some system be adopted of dealing with patients in every-day practice which will insure both the physician and the patient deriving the full benefit of all that modern medical science has to offer in the matter of diagnosis.

I think there is, here, a very real and practical problem, which deserves attention. As medical scientists, we are all justly proud of

the tremendous strides that have been made in recent years in the development of diagnostic methods of precision. The fact is that from this scientific standpoint the art of diagnosis has almost reached the state of an exact science. At all events, in a large proportion of diseased conditions with which we have to do, it is nowadays scientifically possible to make a positive "Q.E.D." What is now needed, as it seems to me, is that the profession should evolve, from the utilitarian side, some adequate system of utilizing these possibilities so as to get out of them, for doctor and patient, their full quota of practical and economic advantage.

The most effective, if not, indeed, the only way of bringing this about, I believe, is by applying to it the same principle of cooperation that has already been successfully applied to the other recent evolutions of medicine—to specialism, and surgery, and the like—and which pervades, in fact, every department of modern work. It is quite true that no one man, alone and unassisted, can properly carry out a thorough and systematic routine of diagnosis, such as every patient suffering from any serious condition, or suspected to be so suffering, is nowadays entitled.

Such a diagnostic course would, in many instances, tax the resources of a comprehensive laboratory and a corps of trained investigators. But these are days of cooperative effort; and there is no reason why the resources of such an institution and such a corps should not be taxed. It is equally true that the general practitioner frequently finds hinself unable, by himself, to carry out an adequate form of treatment, so that he is obliged to remove his patient to a hospital, frequently in some distant city, and call in the services of a surgeon, and an anesthetist, and a corps of surgical nurses, and impose upon the patient the necessity of laying up in the hospital for several days.

There is no reason why the same system should not be followed in the making of obscure and difficult diagnoses. Indeed, so far as I can see, it must be followed if the doctor wishes to avail himself and his patient of the limit of modern diagnostique. All that is needed is that the physician should boldyl institute such a system of dealing with his patients—to which, I am confident, he will encounter no general opposition, but, on the contrary, will find that it is met half-way by the spirit of the times. It is no longer necessary to the doctor's prestige and influence that he should pretend to be all-sufficient in himself and by himself. Nobody in these days expects him to be so; rather, people look askance at the doctor who does so pretend. But they do expect him to fulfill the office of an alert, well-informed and conscientious agent or representative of his science, who will procure for them, where he himself is quite justifiably unable to render it, the best service that modern medical science can furnish.

In many instances the making of correct diagnosis is a matter of several days, and demands, as already intimated, expert attention and conditions of control such as can only be attained by having the patient under continuous observation and restriction in a hospital, and the cooperative work of two or three investigators working together on the case. In such instances the physician should not hesitate to impress this upon his patient, and get his cooperation in bringing it about, just as he does in the event of a surgical operation. As stated, he will find the ground ready for this kind of educational culture; it is just what people expect and demand.

Nor will the physician find any serious obstacle to the financial aspect of such a system. In the main patients are ready and willing to pay, and pay well, for thorough, painstaking diagnosis, if they are once assured that they are getting the goods. In short, the doctor will find that by such a course his economic and professional interests are greatly enhanced. I am sure that much of the unsatisfactory economic condition which prevails in the rank and file of medicine today is due to the failure of the general practitioner to avail himself to the full of the splendid advantages that his science stands ready to afford him. With Ruskin, "I do not wonder at what men suffer, but I wonder at what they miss."

I do not mean, of course, that this kind of cooperative routine should be followed with every patient. In many, doubtless the majority of cases, the doctor is perfectly capable of carrying out his own diagnostic procedures. Most of the cases that he is called upon to treat are, happily, mild and simple, easily diagnosed and readily cured. But in the exceptional and obstinate cases of diagnosis, as in the rare and difficult cases of treatment, it is both his privilege and his obligation to avail himself and his patient of the cooperative facilities that are provided in the present-day centers of medicine. Nor does this always involve the removal of the patient to a hospital for observation and control, as suggested above. There are many more instances in which this cooperative assistance

may be invoked by proxy. A urinalysis, a little more thorough than the physician himself is in a position to make; a blood-count; the identification of a suspected tissue; an examination of the sputum; will many times give the clue to an obscure and unmanageable case and turn defeat into victory. And these can be obtained in these days by the simple (but all too little exercised) expedient of mailing the material in question to a trustworthy clinical laboratory.

Dear practitioner, everywhere, you are the heir to a rich and splendid heritage of scientific achievement and possibilities. Do not, I beg of you, be content with anything less than a full participation in your inheritance.

When someone said to Sir Francis Burnard, "*Punch* is not so good as it was," he replied, "My dear fellow, it never was."—British Medical Journal.

DR. VICTOR C. VAUGHAN

One of the best things that the American Medical Association did at its recent meeting in Minneapolis the latter part of June was to elect to its presidency Dr. Victor C. Vaughan, for many years a teacher (now dean) in the medical department of the University of Michigan—indeed, this is one of the best things that the Association ever has done.

I speak with peculiar earnestness, because I sat under the instruction of Dr. Vaughan myself, at the Michigan University, 'way back in the 80's. At that time Prof. Vaughan also was a young man, having received his diploma from our common alma mater only a few years before—in 1878, I believe. It was Dr. Vaughan who first aroused in me an enthusiasm for practical therapeutics. I shall never forget the special lectures he gave us on the five important drugs, opium, aconite, belladonna, nux vomica, and digitalis, and their active principles. Into those few lectures he crowded a fund of practical helpfulness that has rendered me good service throughout a most strenuous professional life, merging into the special work in which I am now engaged and for which they served as essential inspiration.

Dr. Vaughan has always been at work in the field of research, but never has he ceased to be a practical man at the same time; and, somehow, whatever he does, to whatever work he may turn his energies, something comes out of it which makes for the benefit of the profession, and, through the profession, of the people.

Is it to be wondered that I have a peculiar interest in the newly elected president of the American Medical Association, and entertain for him the highest admiration? I want to congratulate him personally, and so take this opportunity of saying, "Good for you, Professor, you had it coming."

'WARE THE GREEN APPLE

In a beautiful story published in one of our magazines, Virginia Terhune Hardy depicts the terrors that agitated the mother when her son played football. Each season the game takes its toll, small in the aggregate, as compared with the benefits it brings in the way of developing manliness, yet spelling grievous loss to the families of the individuals involved. The same may be said of every athletic sport—swimming, boating, wrestling, and the rest.

Nevertheless, who can value these exercises as a preparation for the buffets and the demands that will surely fall to the lot of the future man? What would become of humanity were our boys confined by doting mothers to crocheting and croquet! Croquet? The writer bears on his ankle a relic of a croquet game of many years ago.

With characteristic feminine inconsistency, this same mother who dolls her boy, allows him a latitude in the way of eating that appals the male adult. For every life lost by man-making sports, twenty succumb to the green apple. True, its value lies along the same line—the experimentation whereby each learns for himself to differentiate between foods wholesome and foods otherwise. Painful and perilous, though, is the experimental stage. The juvenile stomach that has endured candy, cookies, pies, puddings, ice-cream, peanuts, raw artichokes, bananas, bread and jam, and the various leftovers, that are to be obtained by foraging through ice-box and pantry during the famished interval between meals, rebels at last when the sour, wholly indigestible unripe fruit is added.

Generally it is merely an attack of belly-ache, to be dissipated by a carminative, antacid or anodyne; sometimes an emetic is needed, to rid the outraged stomach of its unreasonable burden, and the mother is edified and confounded at the evidence of her small son's gartronomic qualifications. But the trouble may be more serious, and convulsions mark its gravity. Then, indeed, the hypodermic of apomorphine comes into action. Or, that old family standby, ipecac, meets the need—not old, uncertain and too often ineffective syrups, wines, extracts, and powders, from which the virtues long since may have departed, but in the form of the un-

changing and ever dependable emetine granules dissolved in warm water.

The old custom of coping with children's ailments by administering an emetic while awaiting the doctor's advent was a good one and ought not to become obsolete. Every sick child from time to time requires cleaning out, and the stomach needs it quite as much as the bowels. Many a time when this preliminary evacuation has been accomplished we find there is nothing left to do, save a warning for the future, which we well know will, of course, be disregarded.

Yet, after all, there is another side to the green-apple question. Why does the boy eat the fruit? Partly, we may answer, because he needs the nutritive principles it contains but which his inattentive parents have neglected to provide in his regular diet. Partly also, because the boy's digestion accomplishes its task so quickly that he is hungry before mealtime arrives—a fact every parent should remember, but few really appreciate. But the principal reason is, that the child must learn to eat, to accustom the immature digestive system to varied demands.

So it is that the urchin sits on the fence, munching the unripe fruit sneaked from the neighbor's orchard; and next day, instead of witnessing a funeral cortège issuing from his home, you see the same urchin perched on the same fence munching more of the same unripe fruit. The growing lad has accustomed his peptic viscus to a foreign comestible and, Mithridates-like, surmounted the peril of empoisonment.

Adam and Eve had many advantages but the principal one was that they escaped teething.—Mark Twain.

SEMPER PARATUS

"In days of old, when knights were bold," a great British family assumed as its motto, "Semper paratus"—"I am always ready."

This would be a good motto for the young doctor starting to practice; but he could improve it by making it read, *Semper præparatus* Always ready is well enough in its way, but it is rather a matter of course; always prepared, is but slightly different in meaning, yet it is the difference between success and failure.

Of the hundreds and hundreds of good things published in this journal, one especially comes to my mind. It was written by a woman, and when the lady doctor deigns to write, she is sure to say something that arrests attention and clings to memory. She had a case that meant something to her, and she happened, by good judgment, to have in her satchel exactly the remedy needed in the circumstances. This remedy was administered, the attack was aborted, the sick child quickly cured, and the family left in grateful appreciation of the doctor's skill.

I do not recollect now what the particular remedy was—I think it was a tonsillitis tablet—but what I remember best was the doctor's explanation. She had a habit of studying the advertisements and catalogs of remedies; and when she came upon anything she thought she might need she sent for it. "This is what keeps me poor," humorously added the doctor in her account; but I venture the assertion that that one case paid her for a year's experimenting along that line.

This brings to mind an incident in the writer's early years of practice. The nitrite group had just been introduced and he was so impressed by the accounts of their wonderful properties that he invested in a bottle of amyl nitrite. Strongly bottled, the glass stopper securely tied down with a cap of goldbeater's skin, the new acquisition rested many a day in the satchel, being handled carefully and regarded with a certain awe.

One day the writer was passing along the street, when suddenly cries of fear issued from a near-by house. A woman rushed out and, recognizing the doctor by his satchel, screamed to him, for God's sake to hurry, that a woman was dying. He rushed in and found a room full of excited, panic-stricken neighbors, who surrounded a woman prostrate in the agony of angina pectoris. Instantly the thought of the nitrite came to mind. The bottle was wrenched open, a drop of the pungent liquid applied to a handkerchief, and the latter held to the woman's nose. One inspiration sufficed; the spasm relaxed, the woman rose to her feet, looked around the room, and then, in a perfectly natural voice, said: "What are all you people doing here? There is nothing the matter with me."

Tableau! An amazed assembly, stupefied, with wide-open eyes and mouths, and a doctor scarcely less amazed, but with sense enough to hide his surprise and to look as if going about doing such miracles were a common matter with him. As if it were but yesterday, I can see that woman as she stood there in the crowd of common-looking people. She was tall and svelte, with white skin, blue eyes, and thick flaxen braids that reached down below her knees—a typic Marguerite. To the day of her death that noble woman remained one of my firmest

friends, while in the neighborhood I was regarded with something of the same awe in which that miraculous remedy was regarded by those who knew of her recovery.

That was more years ago than I like to acknowledge. Long since then, that remedy has been popularized under the name of glonoin, and the appellation, "the little giant life-saver," bestowed upon it testifies to the appreciation in which it is being held by thousands of physicians.

Am I not right in feeling that one such experience is worth more than all one might spend in such investments for future possibilities? The incident by no means is unique; many a success has been won through the habit of constantly searching for new and better remedies.

If a man believes he has something good for our use and believes in it enough to make him spend good money to tell us about it, he deserves a hearing. If the reasons for his belief seem plausible, his remedy is entitled to a trial. If the remedy is a better one than its predecessors, our patients are entitled to its benefit, and we can hardly afford to permit the other doctor introduce it to them.

This does not justify one in running after every new thing simply because it is a novelty, deserting old and well-tried remedies. One must use judgment. Sometimes a critical perusal of the introducer's argument shows merely that he has something he wants to sell. At other times we see he evidently is honest, but mistaken, through ignorance of the matters on which we are better informed than he.

Of late, many remedies come to us backed by the power of money and headed by the authority of a name. We are asked to buy the remedy, because the great trust company offers it and Prof. Big-Bug says it's good. With all due respect to the professor, we have some little knowledge ourselves, and we ask for something that appeals to our reason before we take up the proffered novelty.

Be kind to little children. Women and children furnish the greater part of our patrons. Men do not count for much in the practice of medicine.

—Dr. Frank P. Davis.

THE CHARACTER OF INFANT STOOLS

A great deal can be learned about the nature of an intestinal disorder from a macroscopic examination of the stools. It is the character of the stools, rather than the quantity, which determines health or disease; and it is not, as a rule, considered that an infant has diarrhea, even though the movements be quite frequent in the twenty-four hours, as long as the stools are normal in character. Normally the stools of an infant are yellow in color, smooth, of about the consistency of butter, containing no curds or lumpy masses, and exhibiting no mucus to the naked eye. The reaction is very slightly acid, or neutral, or even slightly alkaline. The rule is that when the stools are slightly acid the color leans toward brown; when mildly alkaline, toward green.

Pathologic variations from these normal conditions, i. e., in disorders of the intestines (no reference here being made to the direct influence of the content of the food) and their significance, are as follows:

White or grayish in color, solid or lumpy in consistency, indicates a deficiency of bile, an excess of fat, and a slightly acid reaction. This is the character of the stools in intestinal indigestion.

Black, tarry, sticky stools point to a hemorrhagic condition, usually of the upper digestive tract, and are frequently seen in severe inflammations of the stomach (acute gastritis) or of the small bowel (severe gastroenteritis).

Light brown, or green stools, of an almost liquid consistency, are practically always the result of microbic action, and indicate a true intestinal infection. According to Hayem, Escherich, Vignal, Gautier, and other investigators, diarrhea seems to be excited especially by the organic acids and the alkaloids formed in microbic action. The simple common forms of diarrhea are probably provoked by the irritant action of these acids on the mucosa of the intestine, and the resulting stools are usually alkaline, on account of the attempt of the body to neutralize them. The graver forms, notable for the suddenness, violence and seriousness of their attack, are due to the poisonous effect of the animal alkaloids, and the stools in this case are acid. So, in the early stages of intestinal infections, the stools are green; as the microbic alkaloids are produced they rapidly become light dirty brown, with a very foul odor; and finally become yellow as normality is restored.

Colorless, completely liquid stools (the socalled rice-water stools) represent the extreme stage of an infective diarrhea, when there are no longer any pigment substances available; nothing but the alkaloids of the microbic action and the fluids abstracted from the body tissues.

Finally, let me tell you of a sign observed by my good friend here in Ravenswood, Dr. Young. It was new to me and it may be

new to you. After an infant has suffered from one of the acute summer diarrheas it is often a problem when to resume the regular diet. Begin too soon and the trouble will recur—and yet we are anxious to begin building up the under-nourished youngster as soon as possible. After years of observation of babies—and Young has treated thousands of them—the doctor is sure he has discovered a sign that is of ptactical value. It is this:

Watch the stool of the convalescing babe carefully. Just as soon as you observe small, bright-yellow, glistening particles which adhere to the sides of the vessel—they may be hardly larger than a pin point—the secretions have started up and it is safe to begin feeding the patient, carefully of course. But don't give milk or other solid food of any kind until you see these yellow particles. Dr. Young has been watching this sign for many years and he says they are as diagnostic as Koplik's spots in measles, and of more practical value. He wants the readers of CLINICAL MEDICINE to observe and report.

An observation like this, made practical by much application, may save many lives—and it certainly adds to the doctor's reputation. I am sure that you, Doctor, are picking up similar points in your own work. But are you reporting them?

BABIES' COLIC

Must babies have colic? It might be argued that the colon, being a mere relic of a preevolutionary stage, useless and menacing the life of its human possessor, must learn to fill the office it has to perform in our infantile economy, and that this requires time, punctuated by failures and motives. True, possibly—who may prove to the contrary?

It is so much easier to affirm or to deny than to prove or refute. But, after some years' observation of what mothers give their babies to eat and what the nursing woman herself eats and transmits to the suckling, one readily admits that no further explanation of babies' colic seems necessary. In truth, the dare-devil bravery which women display in presenting aliments to their infants' inexperienced digestive system leads one to favor the proposition that the armies of the world should be recruited from the fairer sex. Swiss cheese, raw fruit, sausage, beer, these, and more stuff, the writer personally has known to be proffered by their maternal guides to luckless infants not yet ready to walk upright. However, we are the more interested in the means of obviating the consequences of these errors of judgment which we know the ladies will make, despite our warnings—be it merely to display their independence. (And how dearly they do relish it when they have given the forbidden fruit and no harm follows that is apparent!)

Two therapeutic principles are involved in the treatment, the first consideration being the relief of the intestinal spasm.

We have to do, here, with a spasmodic contraction of the circular fibers of the viscus, and this is the cause of the pain. Opiates relieve spasm, and paregoric is as common a domestic remedy as the hot-water-bag. The latter very often answers the purpose, but it not wholly safe, as serious burns may result from its incautious application.

Atropine is superior to morphine as an antispasmodic, but these two alkaloids are very big tools for using upon little babies. We have, in the carminatives, remedies quite effective and comparatively harmless—although one may ask what is the effect of the volatile oils on the delicate structure of an infant's kidneys. However, a few drops of aromatic ammonia give quick relief and neutralize acidity at the same time. Better than the working woman's panacea—whisky.

The second indication is derived from the fixed axiom that the fact of irritation presupposes the presence of an irritant. Hence, the evacuants. Among the innumerable evidences of design upon which theologians formerly based an argument for the evidence of a divinity, we may place the existence of rhubarb and ipecac; for, surely, the good Lord, whose creative scheme included babies, must have planted these two drugs in foreknowledge of their needs!

One of the object-lessons for a young mother is, to witness the results of an emetic dose of ipecac. Less obvious but vastly more important is the gentle effect of very small doses of it in restoring normal digestive secretions. An enlightener is rhubarb also, as it brings to light the slimy, ill-digested, fermenting, decomposing cause of baby's pangs. The mother soon learns to note the beginnings of indigestion, and the bottle of neutral cordial is ever at hand. Modern pharmaceutical science has evolved this admirable compound of rhubarb, ipecac, hydrastis, alkali, aromatics, and the safe and effective antiseptic, sodium sulphocarbolate—and even the alkaloidist has not improved upon it.

And this brings us to one of our numerous hobbies—why doesn't the doctor replace the heterogenious collection of household-remedies

to be found in every house by his own sedative? For each of these dangerous unknown mixtures he should supply a safe and effective sedative, instructing the head of the house how she should use them. For, to expect the family to summon the doctor for every trifle is preposterous. People will use home-remedies for colds, coughs, diarrheas, colics, constipation, headaches, little wounds, cramps, and other slight ailments. Better give them your own sedatives and instruct them when and how to apply them.

At the same time take the opportunity to forbid absolutely all headache and insomnia tablets, opiates, toxic antiseptics, and other poisons that might be taken by mistake. This duty accomplished, and the hold of the doctor upon his families is strengthened, and the day of doom for the nostrum is near.

Men and brothers, let us rise, gird up our loins and swat the flies. And sisters, leave your cozy bowers where you have wasted golden hours; with ardor in your souls and eyes, roll up your sleeves and swat the flies.—Walt Mason. Also "clean out, clean up and keep clean"—the streets, alleys, and your own premises.

VACATION ACCIDENTS

Most of us are looking forward more or less hopefully to our summer vacation. Just as soon as Mrs.Blank has had her baby, and when the collections shall permit, we are going to hie us to the woods and forget that there exist such things as sickness and death. Our eardrums vibrate sorely to the complaints of women, our brains ache with the effort to fit thereto plausible explanations, and think of remedies likely to help. Our sympathies have been drawn upon until the fount seems exhausted. Oh, for a lodge in some vast wilderness, where no galoot can call us Doc, where no female may pour into our unwilling ear her tale of wo, where no squalling brat can fight us in our endeavor to relieve him of the effects of greed, and bring to light the mystery of what became of the jam.

But we know better. There may be rest for us "on the other side of Jordan," but there is none on the side of Wisconsin's lakes. We are no sooner planted in the wilds, with no sign of humanity within leagues, than they begin to drop in. Consumptives in the last stages, victims of inoperable cancers, diabetics, nephritics, people with leaky hearts or swollen livers, long past the stage of possible cure, mysteriously drift into our camp, having heard that a city doctor is there. These we dispose of easily, but there are other demands upon our professional services. The accidents that occur must be attended to, and the man who has had experience in vacations will be prepared for such.

A pocket instrument case and simple dressings go as a matter of course. A hypodermic syringe of the sort that can not break; six vials of tablets; a 12- or 24-vial granule-case; atropine for hemorrhages, strychnine for snakebites, morphine, quinine, emetine, calomel, elaterin, glonoin, aconitine, a goodly supply of laxative saline, iodized calcium to break up colds, besides a few others—sure, that, were we to carry our 100-vial-case, we should find that the one thing most needed had been omitted. Also we shall find that of the most necessary drugs our supply is too small.

The accident perhaps most likely to be encountered is a bout with rhus tox. This pernicious plant abounds in many places and seems difficult of eradication. Its effects are distressing and may utterly destroy the pleasure and benefits of the summer outing. Take along a pair of rubber gloves, and pull up every plant, with its roots, and burn them. Don't stop to rub the sunburnt places while at this task, or you'll regret.

Some years ago when this journal published a symposium on this matter, several correspondents favored the application of spirit of nitrous ether as the best remedy. Lately it has been wisely urged that we begin by vigorously scrubbing the affected skin with a brush and laundry soap, to remove the toxicodendrol, the volatile oil to which the poisoning is atrributed. The strongly alkaline soaps are best. Baking-soda gives relief, possibly by saponizing the oil. Fats are believed to increase the suffering, as they dissolve the harmful agent and render it active; but so does alcohol, yet, that it thought to give relief. Lead is generally advised; a solution of lead acetate often serves well, and possibly white lead would be a good application. I do not recollect of hearing the clay-glycerin poultices suggested. Soda, however, is nearly always to be had, and in camp this is important.

Snake venom is a complex substance, but in most American serpents a prominent component is the vasorelaxant principle, which paralyzes the walls of the great abdominal veins, and thus allows the blood to collect there until the patient faints from cerebral anemia. This symptom we can successfully cope with by administering strychnine. As the dose of the venom is indeterminate, and it and the strychnine mutually antidote each other, we have to keep piling in the latter

until the characteristic muscular rigidity is induced, and then sustain this effect by additional doses whenever the relaxation becomes again manifest. The doses of strychnine thus taken may be largely in excess of those that would kill a man not under the influence of the counterpoison.

What else may happen at a summer camp? Anything.

In my collection of scarfpins is one of Spanish make, a black enamel head of Hannibal, that represents a life saved and a friendship made—a man found dying of tuberculosis and acute pleurisy, at a camp twenty-five miles from other aid. The indomitable fight that man has put up for his life has won universal admiration—and it has been successful!

Somebody indulged in quite an outburst of sarcasm once, because we mentioned a treatment for "drowning." Naturally, if a person is drowned there can be no treatment. But how do you know he is really drowned "dead"? Instances are not few where men supposed to be drowned have been resuscitated, even after the lapse of a period usually considered beyond hope.

If I remember rightly, the remedy suggested was the combination of atropine, strychnine, and glonoin—that meets so many emergencies so well. If there remains a spark of life, if the circulation can still carry the drugs to the cerebrum, if its centers can yet be induced to react, there is a chance for success; the usual methods being employed as well—artificial respiration, etc. The man who declares there is no hope may be able to say—"I told you so;" but he never saves anybody. Even with failure there remains a sense of satisfaction that one has at least tried his best.

There are great possibilities for good in that triad: glonoin, to quickly suffuse the brain with blood and arouse the vital reaction; atropine, to continue and increase the effect attained by actively dilating the capillaries; strychnine, to enhance the activity of both, and the cerebral response, to strengthen the heart and lungs, and to arouse the vital functions. I look upon it as the post powerful and widely applicable emergency-remedy ever devised.

ANTINARCOTIC LEGISLATION BY CONGRESS

For several months past we have had a great deal to say about pending antinarcotic legislation, good and bad. We have warned our readers against the danger of certain bills, introduced in Congress and in different state legislatures, which, while they have purported to be efforts to end a great evil, were really so drafted as to be class legislation of a dangerous character.

We have been and are favorable to every straightforward effort to put an end to the improper use of morphine, cocaine and similar dangerous habit-forming drugs. We are therefore happy to announce that a bill of the right kind has at last passed the lower house of Congress, one which seems sane, honest, and promises to be effective. We refer to Mr. Harrison's measure, H. R. 6282. This is (except for a few minor changes) the bill drafted by the National Drug Trade Conference, at the meetings of which, in January and April, representatives of CLINICAL MEDICINE were present. A digest of this bill will be found on page 430 of the May number of CLINICAL MEDICINE, to which we refer you. It is now pending in the United States Senate, where it has been read twice and referred to the Committee on Finance. There is good reason to believe that it will be passed quickly, and that it will receive the signature of President Wilson, who is known to be very anxious that legislation of this character shall become effective as soon as possible.

We urge every reader of CLINICAL MEDICINE to support this bill and to use his influence to secure its passage unamended. As it now reads there is no discrimination against the physician, it being specifically provided that—

> Nothing contained in this section (Section 2) shall apply (a) to the distribution of any of the aforesaid drugs to a patient by a physician, dentist or veterinary surgeon registered under this Act in the course of his professional practice only, *provided, however*, that such physician, dentist, or veterinary surgeon shall personally attend upon such patient.

This act will place burdens upon the medical profession, but they are equitably distributed, are not excessively onerous, and seem to be necessary to render the legislation effective in the suppression of drug-habit abuses. Every physician, dentist and veterinarian will be required to register with the collector of internal revenue of his district and to pay a special tax of one dollar a year. Unless he is so registered it will be impossible for him to dispense, sell, distribute or give away any of these drugs or their combinations (except in minute quantities) without exposing himself to fine and imprisonment. Since practically every physician, no matter whether he prescribes or

dispenses, is compelled to have at hand ready for emergencies a supply of morphine, codeine, cocaine, and the like, no one will be exempt.

This bill requires proper records of the physician's purchases, but these are provided for by the enforced preservation of duplicates of the official order-forms, by the use of which supplies can alone be obtained. The doctor will not be compelled to keep a record of "sales," that is, of drugs dispensed. The excessive use of narcotic drugs in his practice, being readily detected by the federal inspectors, will, however, be sufficient cause to subject him to rigid scrutiny and prosecution if he goes astray. As the bill now stands it will be possible to trace to the ultimate consumer all the opium and coca and their alkaloids and derivatives imported into the country. As soon as the law becomes effective it should cause an enormous reduction in the consumption of narcotics, put an immediate end to the peddling of cocaine, heroin and morphine, be effective in closing up the opium dens, and make the sale of narcotics to drug-fiends a mighty perilous business.

There are several men who deserve especial commendation in connection with the movement resulting in the framing of this national antinarcotic bill. Prof. James H. Beal, secretary of the American Pharmaceutical Association, was largely instrumental in getting together representatives of the different branches of the drug trade in the National Drug Trade Conference, and Mr. John C. Wallace, of Newcastle, Pa., presided at its meetings and represented that body in private conferences with Mr. Harrison in a manner which was eminently fair to all the interests concerned. These two gentlemen represented the American Pharmaceutical Association. Mr. Charles M. Woodruff, of the National Association of Manufacturers of Medicinal Products, the secretary of the Conference, also did most excellent constructive work. The interests of the physician, especially of the dispensing physician, were carefully looked after by the representatives of the American Association of Pharmaceutical Chemists. As a matter of fact the members of the Conference generally were plainly actuated by high ideals, and the recognition by Congress, of their work in building this bill which passed without opposition, speaks well for their work.

Again, we say, *support this bill;* but insist that it shall not be tinkered with in the interest of any individual or trade. Also, watch carefully for any state legislation which may possibly be inimical to the interests of the physician.

CLINICAL EVIDENCE

The difficulty with clinical evidence lies in its uncertainty. One can never be altogether sure that the phenomena presented to his consideration are *post* or *propter hoc.* Sequences are not necessarily consequences.

Take for example echinacea. Originally introduced by Mayer as a remedy for snake poisoning, this root acquired some repute because many persons bitten by poisonous serpents and treated with its extract did not die then. But not one of these persons was aware that of those bitten by rattlers only ten percent die in consequence; of those similarly wounded by copperheads, but one percent succumb; and the Smithsonian Institute could not find a single authenticated instance of death resulting from the bite of any species of moccasin.

Not knowing these facts, one might treat 100 persons bitten by rattlesnake and, having but 10 percent of deaths out of that number, attribute to the particular treatment a high value, such as it in no degree deserved.

So as to the treatment of wounds by the local application of fluid preparations of echinacea. Some time ago I treated a series of wounds, abrasions, bites, and so on, where the skin was broken and inflammation — *ergo* infection—had supervened, by applying tincture of echinacea. In every case there was next morning such evident improvement that we all felt inclined to place a very high valuation on the remedy. But—was it the plant-principle or the alcohol?

Frankly, I do not know. Do you?

Here we have the objection to clinical evidence in a nutshell. It is difficult at all times to separate the accidental and the psychologic, and fairly estimate the value of the remainder. Still, it can be done.

How?

Only by the application of the collective investigation. This powerful weapon has been urged repeatedly, but it seems inpossible to induce the medical profession to put it to use.

More than 30,000 practicians probably will read this. If every one of them who has employed echinacea were to send us a report of his results, we could go far toward securing a true composite picture. One may err, a dozen less likely, but for thirty thousand to do so is scarcely possibly.

Leading Articles

How Do Purgatives Act?

By GEORGE E. PETTEY, M. D., Memphis, Tennessee

EDITORIAL NOTE.—In June we published the first installment of Dr. Pettey's paper upon the purgatives, which we complete in this issue. Since this article has been put into type the Doctor's book, "Narcotic Drug Diseases and Allied Ailments," of which this matter forms a part, has come from the press of F. A. Davis & Co., Philadelphia. This work is filled with material of the utmost value to the general practitioner. You should read it.

II.

IN HEALTH, when the nerve-centers are acting normally, motor impulses are *generated and rhythmically transmitted* to the abdominal viscera. This is manifested in the intestinal tube by waves of peristalsis, setting in at the pylorus and extending throughout the entire length of the small intestine. The waves amount to a wormlike movement by which every part of the structure of the tube is changed in its relation to other parts.

The uniformity and strength of the motor waves depend upon the state of activity of the nerve-centers. If the centers become lethargic, the waves are less distinct; if the centers are profoundly blunted, the waves cease altogether. In disease, they frequently are in this inactive state; in narcotic addiction, they are habitually obtunded.

Direct Physiological Stimulation

So far we have considered three of the methods by which this inactivity may be overcome, but the fourth, which is by far the most valuable and efficient, is now to be considered.

Inasmuch as the functional activity of the intestinal tube depends upon the nerve-centers, if these centers are inactive, the motor activity of the intestinal tube, and the secretory activity of the glands emptying their products into it, are correspondingly impaired or suspended.

In attempting to remedy such a disordered condition, our first effort should be, to restore as far as possible the centers to a state of responsiveness. If they have become exhausted from overexcitation, then sedatives, motor depressants, should be given; if the suspension of their activity is due to the sedative effect of some morbific poison, then remedies that will directly stimulate the motor centers should be given.

It should constantly be borne in mind that, to secure evacuation from the bowel, it is equally as necessary to stimulate activity of the motor function of the tube as of the secretory function of the glands.

Bile the Physiologic Peristaltic Stimulant

The bile is probably the normal stimulant of the intestinal movements, and most substances employed as cathartics doubtless act in the same way. These substances irritate the terminal filaments of the sensory nerves distributed to the intestinal mucosa. This irritation is transmitted to the centers, and there motor impulses are generated and reflected to the point from which the irritation comes; and in this way that part of the intestinal tube is set in motion.

If complete paralysis exists, of course no amount of irritation will excite motion. Where paralysis is only partial, or where the centers are benumbed by disease, or have their sensibilities reduced by powerful sedatives, a higher degree of irritation is necessary to induce peristalsis.

Agents which excite peristalsis by irritation of terminal nerve-filaments frequently are incapable of exciting such action unless these centers are brought into a state of responsiveness by direct stimulation.

The intestinal fluid may be an irritant to all parts of the mucous membrane which it

reaches; but because the tube lies in numerous folds the passage of this fluid downward, when motor activity is impaired, is much delayed. Until it has been distributed downward to a considerable extent, enough of the surface is not irritated to cause peristalsis throughout the entire length of the tube.

In the author's experience, there are few conditions that make it best to do indirectly what can be accomplished directly. It seems unreasonable to depend upon so inefficient and uncontrollable an agency as reflex irritation to induce peristalsis when it can be excited, to any degree desired and at just the time it is needed, by stimulation of the motor centers with strychnine.

Physiologists teach us that waves of peristalsis set in at the pylorus and extend down the entire length of the tube. This doubtless is true in health, since these waves originate because of the normal activity of the motor centers and are transmitted throughout the entire length of the tube; however, when the biochemism of the motor cells is interfered with by toxins, these normal waves cease or are much less pronounced.

In this condition, if it is sought to excite peristalsis by introducing irritating substances into the intestinal canal, that part of the canal to which the irritant is applied will first be thrown into action. The contraction of the tube thus induced urges the irritant downward with greater or less speed.

But as these substances make their impressions upon each section of the tube only as they reach it, and as the motor impulses called out by this irritant are reflected only to that part of the tube from which the irritation came, the tube is not thrown into motion as a whole or at once, but section by section, and only as each section receives motor impulses transmitted to it in response to impressions made by the irritant upon the nerves of that particular section.

Strychnine as a Motor Stimulant

Strychnine is an excitomotor stimulant and has an elective action for the involuntary, or unstriped, muscular fiber; and, as the muscular coat of the intestine is composed of this class of fibers, the entire length of the intestinal tube can be thrown into motion by direct stimulation of the motor centers by this drug without materially effecting the voluntary muscles.

Peristalsis induced in this way corresponds exactly with that of health; that is, it occurs because of the artificially induced activity of all the cells in the motor centers controlling this function, and because motor impulses generated in response to this artificial stimulus are transmitted in a uniform degree to all the structures that would receive them if the centers were acting normally.

The quantity of strychnine required and the frequency of administration depend mainly upon the degree of lethargy or insensibility of the nerve-centers; but when strychnine is administered in sufficient quantities and at proper intervals, active peristalsis can be excited and kept up as long as desired, provided the nerve-centers are in condition to respond to any kind of stimulation.

If strychnine be administered in conjunction with mercurial or other secretory stimulant, each does its part of the necessary work in bringing about the conditions essential for normal evacuation of the bowel.

By strychnine, the intestinal canal throughout its entire length is thrown into normal or supernormal motion by stimulation of the motor centers. By increasing the irritability of the motor centers, this agent brings those centers into such a state of sensitiveness that they readily respond to any peripheral irritation reflected to them. In this way reflex stimulation is made to augment direct stimulation more effectively.

As soon as the secretion-producing agent begins to pour its product into the intestinal canal, this secretion and any other intestinal contents are gently, gradually, but certainly carried downward, thus bringing the chemical irritant into contact with more extended surface of the intestinal mucosa.

There occurs no overdistention of the bowel at any point, no reversed peristalsis, vomiting, colic or other distress. In other words, the condition essential to normal evacuation of the bowel have in reality been artificially induced, and no more distress or other discomfort accompanies the act than if no artificial means had been used in its induction.

This action is primary, direct, and sustained. Increase of peristalsis is one of the early effects of strychnine. It may be noticed within thirty minutes from the time of giving a full hypodermic dose; this evidently being due to its direct stimulation of the motor centers. This effect of strychnine probably persists longer than any other; or possibly it would be more correct to say that intestinal movement excited by the strychnine continues after the other effect of the strychnine has completely subsided. This is due to the fact that the active peristalsis excited by the strychnine results in a more perfect mixing of the intestinal con-

tents. The chemical changes incident to this augment the effect of the strychnine by increased reflex stimulation, and this persists after the stimulating effect of the strychnine has ceased.

Theory of Action of the Mydriatics as Synergists to Strychnine

In this connection, the author wishes to call attention to the action of the remedies of the belladonna-group, which in this particular are synergistic to strychnine.

Strychnine increases the motor activity of the intestinal canal by its action as an excitomotor stimulant. On the other hand, atropine, scopolamine, hyoscyamine, daturine, in fact all of the principles of the belladonna-group, excite both secretion and intestinal motion; but the manner in which they do this seems not to be well understood, at least it is not clearly taught in therapeutic works.

The author is never satisfied to use any drug empirically; if he can not arrive at at least a plausible theory as to its mode of action, he can not use the remedy to advantage.

In considering the action of the belladonna-group of remedies, the following view of their action seems more satisfactory than any other, and the writer believes it is in accord with established physiologic law.

It is an established principle of reason that there can be no cause without effect. When an effect is demonstrated, its antecedent cause is assumed. There is no action without a reaction; therefore, no reaction without a preceding action.

In applying these principles of reasoning to the belladonna-group of remedies, we find that in their primary action they inhibit vasoconstriction, thus becoming vasodilators. This inhibitory action extends to the circular muscles of the intestines as well as to the circular fibers of the arterioles and capillaries, and doubtless also to the circular fibers of the ducts of the lymphatic system.

This inhibitory action on the circular fibers of the intestine overcomes irregular spasmodic action in that organ and thus aids in preventing griping from the effects of the secretory stimulants. This occurs during the time the primary effects of the remedy are active.

The same inhibitory action extending to the circular fibers of the arterioles and capillaries allows them to dilate, thus rendering the peripheral circulation more active. The peripheral surface of the body is the sensitive, the perceptive area. Increased circulation in any part increases its sensitiveness. The friction of the blood or other excitant effects of the increased circulation in the surface of the body stimulate the sensory nerves leading from that surface.

This stimulation is taken heed of by the sensory terminal filaments, and this expression of activity is transmitted to the motor centers, and, being received by these centers, is responded to in sensory, motor, and secretory impulses. This impression, slight as it may be from any given part, coming as it does from the entire peripheral area, amounts in the aggregate to a positive stimulation of the nerve-centers.

In other words, the slight impressions arising from such an extensive area, converging as they do upon the cerebrospinal centers, make a distinct, potent impression upon these centers; and this is responded to by the production, and the transmission to all the structures governed by such centers of sensory, secretory or motor, of impulses, according to the nature of the center receiving such peripheral impression.

Thus do the entire group of belladonna remedies, notwithstanding they are motor inhibitory in their primary action, become, secondarily, excitors both of secretion and of intestinal movement.

This makes them invaluable adjuncts to, if not essential ingredients of, all purgative compounds. After having, by their primary effects, controlled spasms and prevented griping from the effects of the secretory stimulant, they, at a later and opportune time, supplement the effects of such agents by the augmentation both of secretion and intestinal movement.

This action is made more effective if strychnine has been given in combination with the other ingredients of the purgative course. Excitation of the nerve-centers by strychnine brings them into a hyper-sensitive state and thus makes them more responsive to the reflex stimulation excited by the secondary action of the remedies of the belladonna group.

Construction of a Physiologically Balanced Purgative

A physiologically balanced purgative compound is one in which each ingredient of the compound augments and supplements the action of the other, and all together, working in complete harmony, excite every function concerned in the evacuation of waste by the bowel proportionately.

The conjoint effects of such a combination insures the evacuation of the bowel with the same ease and freedom from distress as if action were voluntary, and not artificially induced.

Again, this proportionate, simultaneous stimulation of all the functions concerned in the bowel movement effects the discharge of the waste without undue depletion. Whereas, if chemical irritants or secretory stimulants alone are depended upon and these are pushed to such a degree as to carry off the accumulated waste, when they do begin to act, act excessively and unnecessarily deplete the patient.

But, it is important, as a general rule, that undue depletion from the action of purgatives be avoided. It is especially so in the treatment of anemic patients.

A physiologically balanced purgative compound, may be depended upon to act effectively upon patients of any class, and should be employed whenever a purgative is needed. However, purgative compounds which do not contain strychnine and atropine or other belladonna principles in sufficient quantities to stimulate effectively active peristalsis not only are disappointing in their action, but often cause great distress.

Strychnine and atropine given together act synergistically, and a more satisfactory degree of peristalsis can be excited by the two remedies combined than by either alone. For this purpose they are ideal agents.

The following schematic diagram is suggested as showing the principles upon which a physiologically balanced purgative compound can be made. A combination of a suitable quantity of a remedy of each of the four classes here named stimulates every function concerned in normal evacuation of the bowel and brings about that result with the least disturbance to the system and with the least possible tax upon its resources.

SCHEME FOR AN IDEAL PHYSIOLOGIC EVACUANT

Secretory stimulant may be any one of these alone or two or more combined	calomel podophyllin cascara rhubarb senna leptandrin aloin bryonia jalap or other such remedy
	castor oil? saline laxatives?
Motor excitant	strychnine
Antispasmodic	ipecac or emetine. (Also secretory stimulant.)
Vasodilator	atropine hyoscine hyoscyamine scopolamine daturine (also antispasmodic and, secondarily, secretory stimulant.)

Purgatives Must be Taken on an Empty Stomach

A purgative should never be given on a full stomach. If the demand for its effect is so urgent that there is not time to wait until the stomach empties itself, then an emetic should be given. Beginning with an empty stomach, removes one of the causes of nausea, vomiting, colic or other unpleasant concomitants, and does much to overcome the objections to the use of purgatives.

The purgative remedy administered acts as such because its chemical or physical properties are of a nature to render it unfit for use as an article of nourishment. These chemical or physical properties render it unacceptable or repulsive to the system—it is an irritant. Because of those irritating or unwholesome properties, the "sentinels on guard" set up an active effort to eliminate this foreign substance or its products.

The commixture of such an agent with the stomach contents renders the entire mass unacceptable for assimilation; therefore it must be thrown off, either by vomiting or be passed through the intestinal canal as waste.

Such a bulk of matter in the stomach interferes materially with the prompt and complete absorption of the remedies administered, thus delaying or rendering uncertain their action. The material is either voided from the stomach *en masse* or passed precipitately into the small intestine, where it greatly encumbers that organ and causes unnecessary suffering.

The passage, through the intestines, of incompletely digested matter, with the numerous chemical changes incident to its admixture with the other intestinal contents, together with the irritation caused by the incompletely digested matter itself, is a principal factor in the causation of colic, griping, and other distress, as well as of the reflex nausea and vomiting which so often precede or accompany the action of purgatives. This distress is avoidable, and should be avoided.

Few physicians give even a moment's thought as to the contents of a patient's stomach at the time the administration of a purgative is begun. The patient may just have partaken of a hearty meal; or, if not that, if the purgative is given in divided doses through a period of several hours, he is almost certain to "fill up" while he is taking the successive doses.

Food taken at such a time is not completely digested, and the disturbances of the gastro-intestinal canal produced by the purgative

cause it either to be vomited, or to pass downward from the stomach before having been fully prepared for assimilation; and in either case unnecessary distress occurs. The exercise of a little precaution, a little forethought on the part of the physician will prevent these unpleasant effects; hence, these facts certainly should always be borne in mind.

The administration of a purgative should not be begun when there is food in the stomach. No food should be ingested while the purgative is being administered, and, furthermore, the fast should be continued until the purgative action has entirely ceased. Also, the first meal after the purgative should be a very light one. After the action of a purgative (even after all discharges have ceased) the digestive tract is more or less enervated and disturbed; therefore it is not in condition to undertake the digestion of a full meal. If a full meal be taken at such a time, it will greatly lessen the good effects that otherwise would have come from the action of the purgative.

In the opinion of the writer, it is a serious error to administer an active secretory stimulant without at the same time making efficient provision for stimulation of the motor function of the intestinal canal. Except in a few rare conditions, motor activity always is as greatly impaired as the secretory function. Since each of these is essential to satisfactory bowel movements, the efficient stimulation of each should be provided for in every purgative compound.

Mode of Action of Purgatives

It is the generally accepted view that all purgatives act in one of three ways; namely, by osmosis, by reflex stimulation or by direct stimulation of the motor and secretory centers.

The osmosis-theory of the action of the saline cathartics has been accepted for many years, but recently doubt has been thrown upon the correctness of that view of their action. Thus, also, the writer's personal clinical experience some years ago led him to the conclusion that the saline cathartics do not traverse the entire intestinal tube.

According to the osmosis-theory, this concentrated saline solution remains in the intestinal tube, and, because of its affinity for water and the laws of osmosis, fluids are attracted from the surrounding tissues; and thus the flooding liquid stools induced by this class of cathartics are induced. If this view of their action is correct, the salines do not pass into the circulation at all, but remain in the intestinal tube and by their physical action attract fluids from the body.

This view of their action was accepted by the writer up to the time he began to treat narcotic habitués; but, in these cases their action was so disappointing that he was forced to reach the conclusion that the intestinal tube could not be fully emptied by the saline cathartics. This conclusion was reached from the following state of facts.

Doubt Thrown Upon the Osmosis-Theory

A patient when admitted to the institution was constipated. He was given a free colonic flushing, which removed everything from the colon that could be reached by an enema, the same being administered in the knee-chest position. Then epsom salt was administered in full doses, and the dose repeated until from four to six free evacuations had occurred.

It would appear that the flushing action of this saline, preceded by the colonic flushing, would have fully emptied the intestinal canal. It seems certain that it would have done so had the epsom salt and the fluid attracted to the intestine passed through the entire length of the intestinal tube. However, as a result of the administration, on the same day, of a physiologically balanced purgative compound containing sufficient strychnine to excite free peristalsis, the patient passed a considerable quantity of semisolid matter.

Now, the writer does not believe that this semisolid matter could have remained in any portion of the intestinal tube through which these free watery discharges passed. Therefore, he was compelled to conclude, from repeated experiences such as this, that the saline cathartic was absorbed from the stomach and upper part of the small intestine and subsequently excreted by the colon, most likely by the transverse and descending section; *thus passing around rather than through the small intestine.*

The writer cannot say that this theory as to the action of the saline cathartics is the correct one; still, recently some confirmatory evidence has been secured. Dr. Arthur F. Hertz, assistant physician at Guy's Hospital ("Guy's Hos. Rep.," Vol. 63), has shown, by administering bismuth preparations at various periods of digestion and taking x-ray pictures of the abdomen at different periods of digestion, that salines really are absorbed from the stomach and upper bowel and probably excreted into the lower intestine.

Herz, in cooperation with F. Cook and E. G. Schlesinger, has shown that when food is taken into the stomach it reached the cecum in about four hours. A saline aperient, on the other hand, may cause an action of the bowels often within two hours, and in some instances even in half an hour.

Insoluble bismuth being administered with a meal will show, by radiographs, the exact length of time in which food passes down through the different portions of the intestine. When a seidlitz powder or its equivalent is taken at the time of the bismuth or with the bismuth and food and then radiographs are taken, it is shown that the movement of the bowel comes long before the bismuth and food reaches the colon. The excess of water excreted with such movements, therefore, cannot come from the small intestine, since otherwise it would wash the meal and the bismuth down with it, but, as a matter of fact, must be excreted into the lower bowel. Saline purgatives also seem to cause no increased acceleration of passage of the food from the stomach to the cecum.

These investigations seem to show clinically that, when it is desired to empty the colon and not to act upon the small intestine, laxative salines are indicated; but, when it is desired to cause stimulation of excretion or of increased peristalsis or for drainage of the upper bowel, that cathartics other than the salines are indicated.

The conclusion from Dr. Hertz's experiments is inevitable, it seems, that the saline purgative given with the meal was absorbed from the stomach, thus leaving the meal to pursue its own course through the bowel undisturbed, its passage not being hastened by the salines. May it not be that the salt, getting into the blood, renders the latter excessively alkaline? This excessive alkalinity not being acceptable to the nerve-centers, an active effort for its elimination would be excited, and, inasmuch as the colon happens to be the organ through which the salt is thrown off, the free watery bowel movements are the necessary result.

Movements of the Ascending Colon

The recent work of Cannon, and Starling, and Bliss, by which they have demonstrated the function and motility of the ascending colon, leads the writer to offer the suggestion that the saline most likely is excreted by the transverse and the descending colon, and not by the ascending colon.

It has been shown by the investigators named that the functional activity of the ascending colon very greatly resembles that of the stomach. It is from this organ that the residue of nutritive matter not absorbed higher up is taken up by its absorbing villi.

The reversed phase of the peristaltic waves, which begin at the spleenic flexure of the colon and travel backward to the cecum, serves to macerate and mix the contents of this part of the intestine, and to force back the more movable, liquid parts toward the ileocecal valve, thus preventing the too rapid passage of the contents of this part of the bowel to the transverse and descending colon, and giving more time for the absorption of nutrient material from it.

Cannon has shown that these reverse waves of contraction are not true peristaltic waves; that is, they are not preceded by a zone of inhibition, but are mere contractions of the circular muscles, and that these travel from the spleenic flexure of the colon to the cecum in waves at the rate of about twenty per minute.

These contractions of the bowel running in a reverse direction to the normal peristalsis-wave urge backward toward the ileocecal valve the more liquid contents of the bowel and bring these substances into intimate contact with the intestinal villi, which are absorbing structures. It is here that the fluid portions of the residue of the products of digestion are absorbed and the more solid portions are formed into a cone in the center of this part of the intestine. This cone lengthens, little by little, by the concentric action of the circular muscular fibers upon it; and as this cone lengthens it projects into the transverse colon, whence it is swept off by a normal peristaltic wave running in the usual direction and is transferred to the descending colon and finally the rectum.

Now, since it is true, as has been shown, that the ascending colon is an organ from which the nutritious material is taken up, it is not likely that nature would contaminate such a pabulum by pouring into it an unwholesome excretion of any kind. Therefore, the writer does not believe that the ascending colon is an excreting organ at all, but is rather a macerating reservoir from which nutritive material is absorbed.

The Proper Field for the Saline Purgatives

There can be no question of the value and usefulness of saline cathartics, but they should be employed with a definite knowledge of their limitations as well as of their uses. They should not be depended upon to do what they do not do, and what in the very

nature of things they can not do. Some physicians use these salts to such an extent as almost entirely to exclude the vegetable and mercurial cathartics from their armamentarium. Such a course is not one to give the best results.

Surgeons also are depending largely upon the saline purges to empty the intestine prior to operations. The writer is sure that no such good results can be obtained from the salines alone as can be obtained from the administration of the vegetable and mercurial cathartics when combined with strychnine and atropine.

While the saline cathartic occupies a place, in fact fills a place that no other cathartic fills equally well, still, we should discriminate in our use of purgatives. When the action of a saline cathartic is needed because of its prompt action or its depleting effect, then it should be given; but this class of agents do not unload the entire digestive tract, and should not be depended upon for that purpose.

Emetine in Amebic Dysentery

The Report of a Successful Experience in Its Use

By J. F. ROEMER, M. D., Waukegan, Illinois

EDITORIAL NOTE.—Dr. Roemer permits his patient to tell a part of this story, thereby giving it a personal, human touch which brings its reality right home to us. Rogers' experiments in India seem to prove that in emetine we have the long sought specific for that scourge of the tropics, amebic dysentery. We are only just beginning to get corroborative reports from our own Southland, but others should follow rapidly. We invite experience.

FOR the benefit of the rest of the brethren, I want to report at some length my experience with a case of obstinate amebic dysentery, in which emetine finally effected a complete cure. The patient (my nephew) is the author of the first part of this paper, and also wrote part of the conclusion; the description of the treatment and the remedies employed, as well as the conclusions drawn from letters received are my own contribution. I have not seen the patient for six years, some 1800 miles intervening; hence, everything had to be done by correspondence. Had I lived in the city with him, much better results, no doubt. would have been secured.

Now let me quote from the young man's letters, as received from time to time.

The Patient's Own Circumstantial Story

"August 1, 1912. I first noticed flecks of bloody mucus in my passages, which latter came in the form of small, round lumps of about the size of hickory nuts. At this time I had that tired feeling, felt draggy, no ambition, irritable, but slept well and rested nights. Within a week, an acute diarrhea appeared, the desire to evacuate would be swift and imperative, coming on an average of eight times in twenty-four hours. More often than otherwise, there would be no passage except a little blood or mucus. I lost flesh and strength fast. So, on August 8, I quit work and consulted the company's medical man (an ex-steward of an army hospital), who gave me bismuth mixed in water; size of dose unknown. This did me no good. August 15, I went back to work, not realizing how serious the trouble was. I got no better.

"By August 28, however, my condition was so serious that I again quit work and went to my home in San Antonio. Mother gave me two tablespoonfuls of castor oil every night, and a 3-quart enema twice daily for three days. Then, there being very little improvement, we called the family physician, a Homeopath, who gave me some pills (not little pellets) to take. He prescribed rest; castor oil, one teaspoonful every three hours; and a diet of raw eggs, cereals, rice, and milk. We also kept up with the enemas, twice daily. Within a week, there was some improvement, and on September 10 I went back to work.

"The blood and mucus had never stopped entirely, and within a week after returning to work I was down completely and compelled to give up my job. We called the same doctor, who gave the same treatment as before, except that the pills were stronger than the first ones as he said. This was followed by some improvement in a few days. Then, on October 1, I went to Austin and started to work again, but soon laid off, be-

cause of sickness. So it went, up and down. Beginning October 10, I took heavy doses of castor oil for a few days, and once more undertook to work on October 15, and continued ten days, laying off on October 25. I again instituted a course of castor oil until November 1, when I went back to work once more.

"On November 8, my mother arrived on her way to Palestine, Texas, and I went to meet her at the hotel and to remain over night. Upon arriving, I felt about 'all in,' completely collapsing early in the evening, so that they had to put me to bed. All the while I had been working on 'nerve' alone, so, when I got under mother's protecting wing, my 'nerve' gave out and I gave up. I ought to have done so long before. My fault was the same as Cæsar's—ambition. The next morning we called an Osteopath, having heard of the success of these practicians with stomach trouble. The doctor gave me treatments, then said he could promise nothing as to results, and advised me to go to our home, where I could be nursed and cared for. He also advised calling in a medical doctor. He said he would like to try to accomplish a cure himself, but that it would be merely an experiment and taking a long chance; at all events, my sickness would last a long time. He declared, also, that I ought to be in a colder climate. So, two days after my arrival, on November 11, I was conveyed back to Palestine in a sleeping car, under the influence of morphine.

"Arrived home, we called, on November 12, an Allopath, who instituted treatment as follows:

"To begin with, the doctor put me on a diet of gelatin, junket, milk, and beef-bouillon. He gave medicine containing bismuth, creosote, and an opiate, to be taken in water every three hours. He also prescribed a medicine the name of which I have forgotten. Once a day he irrigated with warm salt water, using an enema-tube three feet long. In about two weeks my diet was enlarged to include nearly all the common foods, the treatment remaining the same. At about this time he recommended a course of Mulford's antidysenteric serum. We used thirteen doses of that, taking one or two hypodermics a day, as was convenient. The dose was 10 Cc. About three weeks later, in the first week of December, the Doctor stopped the irrigations and the serum; the medicine, though, was continued.

"The passage of blood with the stools had never stopped, while since the 1st of August I had had from eight to twenty movements in each twenty-four hours. At this time I still had about twelve calls in the twenty-four hours; however, the doctor said that the only thing required now was time and that he would not come any more unless we called him. He stopped his visits after December 13. We continued using his medicine, and I got up and began to walk around the house a little. Still, the bloody and mucous stools continued as before. My condition seemed to grow worse, and on January 4, 1913, I took to my bed again. I also stopped using the doctor's medicine at this time.

"I now determined to appeal to my uncle, Dr. J. F. Roemer, of Waukegan, Illinois, and he took charge of my case on the 8th day of January."

Thus far the patient's story, and I now continue to relate my own experience with this baffling case, and how emetine in the end "turned the trick." The reader, please, will remember that the patient was at Palestine, Texas, and that I was living at Waukegan, Illinois.

At the time stated, the young man's mother wrote me as follows:

"My son's bowels move from fifteen to eighteen times in twenty-four hours; they are thin, fetid, bloody, clear or mixed with mucus, bright-red or dark. The fecal matter is dark-green, or it is dark-red blood. There is straining at stool, with large quantities of gas passing." He was taking high enemas with the long tube, using three gallons of water. His diet was baked sweet potatoes, baked onions, baked apples, fish, cream of wheat, rice, eggs, milk junket, gelatin, cocoa, fruit juice.

The Author Undertakes Long-Distance Treatment

Upon the receipt of my nephew's request that I undertake treatment, I sent him one powder of merc. sol. c. m., with general instructions. The following data are compiled from subsequent reports sent by the patient.

January 11, 1913. The powder was dissolved in 14 teaspoonfuls of water, and one teaspoonful of this was given after each movement.

January 17. Patient had fasted three days, having taken nothing into his stomach except boiled water. Began to improve right away. There had been from eight to twenty-eight movements in twenty-four hours, but they now became almost normal in frequency On the 18th of January the patient had con

trol over his bowels, and there was much foul-smelling flatus. He craved salty food; wanted it highly seasoned.

I now mailed him merc. sol. 30th on No. 40 pellets, three to be taken four times a day.

The bowels moved seventeen times in thirty hours. There was not so much blood, but more of mucus and fecal matter. There was no movement from 2 to 6 o'clock. (This is worth noting.) No clear blood appeared in the stools. On January 20 the patient had eight movements in twenty-four hours, passing bloody mucus, thin fetid, but no bright blood. He felt sick at his stomach and vomited some bile. His pulse was 56; temperature 97° F. During January 22 and 23 he had eleven movements in the forty-eight hours, the discharges consisting of bloody mucus and one pint of thick fecal matter. His stomach felt better; the cramps were not so severe. The stools smelt like dead mice, the odor being very repulsive.

Learning the foregoing data, I wrote him, ordering a diet of rice-water and toast-water. The patient complained at this time of severe crampy pains through the upper abdomen; also of a burning sensation in the rectum from piles. His mind was abnormally active, going rapidly from one subject to another. He had a craving for graham crackers.

January 24. There were eight movements in twenty-four hours; these being dark, bloody mucus, thin, odor not so bad. Also some bright blood was voided.

January 25. I ordered a normal salt enema with glycothymoline to be given after each movement, as there seemed to be rectal irritation and the patient complained somewhat about his piles. No more pure bright blood made its appearance.

January 26. Diet was increased to pea-soup and barley-soup. At this time I learned from a belated letter of the straining at stool, after mucus passed, which caused him to bend over, double up, and leaving a not-yet-done feeling. Considerable gas escaped. Blood came after the fecal matter. The mucus always was more or less bloody, thick and stringy. The patient now craved sweet cakes, pie, meat-pie, bread and milk, and all forms of rich food, moist variety. The mind was very active. I forwarded another powder of merc. sol. c. m.

There now were nine hours between movements, five times in one twenty-four-hour period, with no blood the last two times. The pulse was 56, the temperature 97.6° F. On January 27, the diet was increased by adding orange-juice. There were six movements in twenty-four hours, with a 12-hour interval between the third and fourth movements. Little bloody mucus; thin fecal matter; no blood; odor more natural; no burning in the rectum. Patient had two movements on Saturday; no bright blood. On January 28 he took sac. lac. in water, as before. On January 31 he had four movements in twenty-four hours. Slight cramps; no bright blood; yellow, chunky, feathery mucus.

Is Pronounced a Case of Amebic Dysentery

At this time (early in February) I learned that one physician of the place had been requested to make a microscopical examination, and he pronounced the case one of amebic dysentery. Later, a copy of his report was sent, which reached me February 24, and it stated that the feces were found to contain amœba coli, mucus, blood-corpuscles and leukocytes. The gentleman was not prepared to make a test for Shiga's bacillus. The stain for tubercle bacilli was negative.

February 2. Sixteen hours elapsed between stools and the patient said that this was the longest period he had experienced since September 1, 1912—just six months. The cramps are almost all gone. February 4. The diet was increased to include grape-juice, fruit-juice, lemonade, meat-broths, and soup. Four movements occurred in twenty-four hours. On February 1, the bowels did not move all night; this for the first time in five months. It was twenty-one hours between stools.

Here let me call attention to a remark by one of the attending physicians, who said: "Do not be alarmed, it will be that way for a long time before he will be entirely rid of this; no blood in the stools, then lots and lots of blood."

February 6. Egg and milk was added to the diet. Twenty-four hours elapsed between the last two stools, and the last one was of fairly good amount and was somewhat formed. The patient still was using hot normal salt enemas containing one-fourth glycothymoline. These came away clear. The movements were twenty-one to twenty-four hours apart, and were natural in color, odor, and form. I now ordered (February 8) sac. lac. to be given as before. Jelly was added to the diet. On February 9 there appeared some blood in the stool; also large quantities of gas. The patient sat up in bed for about five minutes. February 11, the diet was

increased all around. Mucus still was coming away, also some blood. The patient slept four hours during the night for the first time in a long while. February 17, creamed dried beef and cream of wheat and rice were added to the diet. On February 18, blood and mucus appeared in the stools, the mucus being preceded by gas. The bowels moved once in twenty-four hours. February 19, thirty-two hours passed between movements. The enema came away clear.

On this date the mother wrote: "Although stools are farther apart, they are not so smooth, but sort of grainy-like; and they were this way even when he ate just broth." Not so well digested. The enema has been reduced from one quart to one pint, with one-fourth glycothymoline."

February 20. Boiled eggs and fish were added to the food. Some mucus was brought away with the enema, and a trace of blood. February 22. Clear mucus, little blood. March 1. Sac. lac. ordered.

By about March 5 the patient began to sit up in bed. But little blood or mucus was voided, though some blood and mucus must have been present all the time. His weight at this time was 100 pounds, his normal weight being 148 pounds. April 2. Out on porch. Powder of sac. lac. given. April 7. Sac. lac. April 12. Ordered to give but one enema in twenty-four hours.

Now let us leave the patient a moment and go back a little.

Learns About Emetine for Dysentery

On February 2, I was informed, as stated, that the trouble had been pronounced amebic dysentery. I knew nothing then of that disease. But about February 8 I read an editorial on amebic dysentery in the February number of The American Journal of Clinical Medicine (p. 122), which spoke of emetine as a cure for that disease, as used by Leonard Rogers, of Calcutta, and reported upon by him in *The Lancet* for October 19 last, so I immediately wrote to the patient's family for a copy of the report of microscopical examination (already referred to above), and also to Dr. A. S. Burdick of The Clinic, asking him what he knew of emetine and about amebic dysentery. In reply I received, on February 18, a splendid letter from Dr. Burdick concerning emetine and amebic dysentery, together with the gracious offer to have prepared for me some hypodermic tablets of emetine, for trial in this baffling case. I at once, of course, ordered a supply, feeling sure that the laboratory report would show the case to be one of genuine amebic dysentery, and emetine the cure. However, great was my surprise when, upon receiving the report on the 24th, to find that no test had been made for the Shiga bacillus.

Conservative Doctor Objects to a Trial

By March 15 I received the consignment of emetine hydrochloride, made at the Abbott Laboratories into 1-8-grain tablets for hypodermic use, and without delay forwarded them to the patient, to be used by his attending physician, sending with it the splendid letter of Dr. Burdick's and asking that he use the emetine as directed, and to report directly to the manufacturing firm.

The last local physician in charge, when spoken to about this matter, said: "Now, you had better let well enough alone. I will make another examination and see whether it results the same. I know these people and also their products; some of which I myself am using with success. I do not know anything about this emetine, but shall do just as your brother thinks best. However, I believe that so long as the boy is improving, I should not try anything new. Should he get worse, though, or show that he is failing, we then might try the emetine." The doctor further remarked that he was watching the patient for signs of pellagra, and suggested that he be weighed frequently, and then be guided by that. This, certainly, is "expectant" treatment. The sick man at this time weighed less than 100 pounds.

The family thought best to do as the Doctor suggested. I, on the contrary, insisted that the new remedy be tried at once. Then came the objection from the other side: "He may have tuberculosis. I had better make a test for that, and if it is positive there will be no need to give the emetine, for then it will do no good." The Doctor made one test, but this was unsatisfactory. A second test was negative; very decidedly so.

In the meantime I was getting reports like the following:

Bloody mucus once or twice a day; straining after stool when mucus is passed. March 4. Bright blood and mucus. Bowels moved four times during the night; all thin watery stuff, dark-green in color. This has been so for a week. The patient feels very tired in mind and in body. Is sick at the stomach. March 7. Patient stronger. Bloody mucus. March 10. Bed is not comfortable any more. March 12. Two tablespoonfuls of bloody

mucus, bright-red blood; five times. Fecal matter, thin, green, at times yellow; poorly digested; some mucus. March 14. Sixteen movements in twenty-four hours; thin, yellow fecal; others consist of bloody mucus. At times, blood-dark; mucus, stringy and yellow. He loses control over the bowels; cramps; much straining. He feels weak and sleepy. This change commenced Saturday, the 11th, with passage of bright blood. March 16. Used glycothymolin, clear. He is somewhat better, had six movements in twelve hours, with less blood and mucus.

March 22. Tested for amoeba coli, with negative results. Then, as stated above, the Doctor wanted to test for tuberculosis, and did so.

Doctor Hoped to Cure Dysentery by Sunshine Walks

Then the Doctor called on the patient and said: "Get him out into the sunshine. He will come out all right. Get him a horse and wagon, and let him travel from place to place. Travel and sun and he will be all right."

On March 23 he used a dilator for the troublesome piles. Every night bloody mucus still was passing. March 29. Eight movements during the night; three movements during the day; thin, bloody mucus. Using the dilator; piles were better. Any pressure around the hypogastric region brought on cramps; even leaning forward and the strings of his pajamas were too much. There were cramps upon moving or exertion, and I feared an abscess of the liver. April 4. Piles better. Fecal matter thick, then thin. Bloody mucus persisting. Patient stronger. Face fuller. April 5. Piles better. Straining about gone.

Now I wrote, insisting: "Get busy; do something."

Family Decides Upon Trial of Emetine

The chapter of events at that end of the line will be omitted, but it will suffice to say that the family determined to give the emetine themselves. Let the boy finish the story. He wrote:

"Although I was much better than formerly, there was still blood occasionally, and cramps after each movement, so we decided to use emetine despite the doctor's objection. Unfortunately I was obliged to take the tablets by mouth, we being unable to use the hypodermic syringe.

"I started taking the remedy on April 10, when I took 3 doses of 1 tablet each; this making a total of 3-8 grain for the day, as each tablet contained 1-8 grain of emetine. Following is a record of the dosage to the end of the first course; viz: April 11, took 3 times 2 tablets, or total of 3-4 grain. April 12 to 21, took 3 times 4 tablets, or total of 1 1-2 grains a day. Interrupted two days (to notice effect), then continued: April 24, took three times 1 tablet, or total of 3-8 grain. April 25, took 3 times 2 tablets, or total of 3-4 grains. April 26, took, 2 times 3 tablets, or total of 3-4 grain. April 27 to 30, took 2 times 4 tablets, or total of 1 grain. Then, from May 1 to May 5, reduced the dosage to twice daily 3 tablets, or 3-4 grain total for each day. This concluded the initial course of the treatment, as brilliant as it was gratifying to all concerned."

The Magical Effect of Emetine

Under date of April 27, the patient's mother wrote me as follows:

"We have seen no blood or mucus in his discharges since the first night after he began to take the emetine. He is gaining in strength rapidly. The only alarming symptom has been the voiding, on one or two days, of a mass of dark coagulated blood." And, in his letter to me, the boy wrote: "The emetine worked what to us was a veritable miracle. The blood stopped coming, and I began to improve rapidly. We now have stopped the use of the emetine entirely and are awaiting developments."

Later letters informed me that on May 13 there was a slight showing of bloody mucus in the stools; the fecal matter though, was formed. From that date till May 17 no blood was passed. The bowels had moved every morning just after the patient got up, but he remarked: "They do not get me up—I get up."

On May 23 they wrote that the patient still was using the emetine—3 tablets every night just before going to bed. He now was helping with the work; walked twelve squares; weighed 133 pounds; was gaining right along. [It does not appear when the remedy was resumed after the 5th of May.—Ed.] June 2. Still improving. He overdid things, and white mucus showed up once in the stool; but no blood. The emetine was stopped May 26. The following letter dated June 11, was received by me, and it will close this all too lengthy account of this interesting case:

"Am feeling well. Getting strong right along. Stools are forming up pretty well. Digestion is good. I drink a cup of hot lemonade before each meal. Expect to leave

for Riveria, Texas, on Saturday night. Shall be careful. Your nephew, C. E. Roemer."

The young man further, writes, and I say with all my heart; "All hail to THE CLINIC, to the Abbott people, to Dr. Burdick, and to emetine. I am well once more!"

[In connection with this report be sure to read two brief articles regarding emetine in the department, What Others Are Doing, in this issue. These throw more light upon the methods of using emetine in dysentery, diagnostically as well as therapeutically—ED.]

Spondylotherapy: A New Therapeutic Method

Its Value for the General Practitioner

By S. EDGAR BOND, B. L., M. D., Richmond, Indiana

THE world in general does not appreciate an innovation, any change in its habits or any thing which will disturb its preconceived notions even when they seem likely to contribute to the greater happiness of the human race at large.

Unfortunately for medical progress, this attitude in the medical profession is particularly bitter against anything new, and any individual who proposes any advances or dares to cure an incurable disease, so called, is the object of such abuse that he is indeed a lion-hearted man, fully possessed of a truth, who ventures to face such opposition. Frequently because of this attitude brilliant discoveries are lost to the medical profession or die with their individual successes.

We have no doubt the originator of spinal manipulation had this spirit of the medical profession to consider when he gave to others than medical men the spread of the gospel of his findings.

Had he not done so, we should not today have the work of spinal therapy upon so firm a foundation. Their self-limited field has exhausted its resources, but has given us some solid truths. But progress will not stand still even in spinal work, and it is up to the medical profession to make broad the work that narrow men have given to us.

Had the originator of spinal therapy given it to the medical man, the latter would have garbled and subordinated it, until it might have shared the same fate as "606," whose brilliant successes were everywhere hailed with such praise, when we listened to the original instructions: to use without mercury, since those freest from mercury responded best. Now , instead of trusting to "606," our minds have become so entwined with mercury in blood dyscrasias that we must mix in more and more mercury, and with less and less praise and success to the once heralded and highly tested specific of Ehrlich.

At first thought we may fear for the success of spondylotherapy for the same reason; but on second thought I am convinced, because of its scientific basis, the process is but a winnowing one, and now in its present status, by giving the medical men of the country the means of using spinal work in their daily practice, we at once begin the process of separating the accumulated chaff from the wheat, all for the benefit of our patients and the truth of spinal therapy.

There is too much of truth and success in spinal therapy as practiced in the narrow cults, and such splendid scientific revelations in store for the daily practitioner, that spinal therapy cannot materially suffer in its newer and broader sense, as it already has been worked out by scientific medical men.

Spinal Therapy Now Recognized Professionally

The fact that men and women foremost in the ranks of scientific medicine are investigating and using spondylotherapy in hospitals and daily practice with such remarkable success in the cure of socalled incurable diseases has aroused the interest of the medical profession as few things have done in the last few years.

It has so far passed the point of vituperation by the profession that it has almost reached the point of ready acceptance.

The treatment of bodily disease, whether functional or organic, by numerous means other than manual manipulation through the spinal cord and its nerve ramifications has passed through the experimental stage.

Thanks to such men as our well-known scientific writer and investigator, Dr. Albert

Abrams, of California, whose half a lifetime spent in original work for the advancement of the medical profession, and who is especially quoted at present because of scientific provings along the lines of spinal work, we are freed from the vague uncertainties and unscientific pretensions which have marked the reign of the charlatan and honest but narrow misguided spine and bone manipulator. It was he who originated the term spondylotherapy and taught us how to use reflexes of the body both to diagnose and cure disease.

What is Spondylotherapy?

Spondylotherapy is the science of evoking the reflexes of the body both to diagnose and to cure disease. Even the laity know that nose-bleed may be stopped by cold to the back of the neck and that heat will relieve pain; both causing reflexes of relief.

Unconsciously the osteopath and other spinal manipulators have evoked spinal reflexes and cured disease. Many of their good results have been due to freeing tense ligaments and muscles, thus securing an adequate supply of blood and freedom of passage of nerve impulses. This has been done very largely through "deep massage," the manipulator ofttimes using the bones as levers in the process.

The old idea of the bone out of place causing *all* disease is being gradually disproved, not only by investigating physicians, but by scientific investigations conducted by osteopathic physicians themselves.

The refusal of physicians as a whole to take up the work of spinal therapy, because of the unscientific statements, together with the demand of the people for spinal treatments, has made for a low standard of "cult" education. Indeed, the conditions were ripe for the "barber osteo" and "stable boy" chiropractor undertaking to equip themselves in a few months for "splendid financial returns."

But the pioneer work of investigation has been done, first without and now within the medical ranks, until today we find hundreds of practical scientific clinicians, educated in all lines of medicine, taking up the work from its new scientific view, testing it out, and finding it adding to their efficiency.

It will not be many years until the osteopathic practitioner will become a practitioner of medicine, or, osteopathy may become in its broader sense as much a specialty as surgery, or ophtholmology—representative of special skill in medicine.

No sooner did scientific medical minds begin investigating and casting out the "rot," than many new and startling truths were discovered, and, not being limited in views, instruments or means of pursuing his studies, his findings became so deep and broad that the narrow "cults" seemed narrow indeed and their means of cure laborious. The practice is being forced into the hands of medical men today because of their cosmopolitan skill.

This is as it should be. The issue favors the physician, for the people are unconsciously choosing the osteopathic work for some conditions and the medical man for others. But ask any of your patients who are taking spinal work from the irregular "manipulator" (providing they "inform you") as to whether they would prefer risking their disease to the narrow spinal man or the physician spinal therapist, and the answer will favor the latter.

The General Practitioner Now Must Investigate

It is now up to the general practitioner to investigate and use these findings in his daily practice, and physicians everywhere must, in order to keep up with the times, pursue special study through postgraduate courses, and the schools of legitimate medicine must add spinal therapy to their curricula. If they do not, men and schools will take up these new truths and make use of them in a way not so easily controlled.

We realize there are some self-constituted "censors" of medicine who, without study of the breadth of spondylotherapy and investigation of the spirit of its founder, are fearful there is a new "cult" appearing upon the already overcrowded medical horizon.

On the contrary, spondylotherapy, or reflexotherapy, appears as the latest and most scientific adjunct to the practice of medicine. No one who is a student of it in its newer sense fears a cult unless medicine refuses to accept evident truths. No one who is practicing spondylotherapy is using it exclusively. In fact, its author and the many taking up the study are recommending so many things to secure the reflexes of the body it precludes it from becoming a separate practice as does also its complex nature. Its use will turn back clinical medicine into its own. It goes to the bedside, studies disease in the human body, gives to us more accurate means of diagnosis and definite means of cure.

We have permitted the laboratory man to diagnose disease and produce remedies and apply them to the human body as if it were

a crucible or a test tube. We have neglected clinical diagnosis and clinical medicine. We have forgotten chemistry was destructive and we were dealing with a vital entity at our bedside, a living force misdirected, a *disease*, an exaggeration or a depression.

The osteopath emphasizes a truth when he considers nature able to functionate properly, merely being prevented by displaced bones. The chiropractor considers 95 percent of all disease caused from an occluded spinal window. His "thrust" is supposed to correct the occluded window and to enable nature to functionate properly. The masseur finds the vital force inherent, active, ready to functionate, but hindered by congestion of the organs, which he seeks to correct.

We have been prone to regard fever wholly as the disease, and reduction of the fever was the object sought after in attempting a cure. We have considered inflammation an enemy to be combated, instead of the evidence of the body's struggle against disease-producing organisms.

In the pursuit of the study of spondylotherapy we shall find these pentup forces of nature can be utilized to diagnose, control, and even to cure some of our most hidden and hopeless diseases. Such diseases as aneurism, exophthalmic goiter, locomotor ataxia, infantile paralysis, are not only being relieved but cured by the direct application of remedies and means direct to the spinal centers, and other chronic diseases are cured with a certainty that is startling.

Importance of the Reflexes in Diagnosis and Treatment

The physician who uses spondylotherapy must again thoroughly familiarize himself with the spine and its nerve ramifications. We have previously looked at it from its anatomical relations, its normal physiology, and in a few diseases from its pathological condition. We must now look at it from its clinical value, as a center for giving curative impulses to pathological conditions in any part of the body or for inhibiting exaggerated activity. In fact, all our activities, even the process of digestion, are the result of stimulation of the reflexes: first appealing to the senses and then mechanically exciting the various digestive processes.

It is not a dream, but an actual fact, that stimulation of certain centers of the spine will increase the flow of the digestive juices, and inhibition of others will cure hyperchlorhydria.

The physician who wishes to use the reflexes of the body will find certain segments of the spinal cord invariably give off certain nerves to certain organs and portions of the body; also, every portion of the body can be mapped out as sensitive (or reflex) or anesthetized portions. The utilization of these centers is in its infancy, and we freely predict that when that vast number of scientific everyday practitioners add their investigations to those comparatively few now interested in original investigation we shall have gone a long way toward changing medicine from an art to a science and replacing galenical medicines with the single remedies, pushed to effect.

The uniform results obtained by utilizing these reflexes to organ and periphery will take electricity from its socalled psychic effect in the hands of inexperienced operators to one of definite therapeutics. Our use of electricity to "stimulate" has been on a par with our complacent "giving some medicine."

We are studying to simulate nature's impulses, so as an aid we use sinusoidal electricity graduated in frequency to the needs of the parts we desire to treat. For instance, in neurasthenia, where we so often have abdominal organs surcharged with stagnant blood and loss of all nerve tone, we place the electrodes on either side of the seventh cervical spine and turn on the slow sinusoidal current. We shall have a contraction of the abdomen and a consequent emptying of blood, and at the same time we are stimulating the greater splanchnic nerve, which stimulation is reflexed to the abdominal periphery.

In diseases of women, uterine reflexes may be utilized with uniform results not now realized. By applying an electrode on either side of the first, second and third lumbar vertebras, a retained placenta has been expressed from the womb and nature fortified to resist infection.

The surgeon, in appendicitis, has ofttimes been surprised, on opening the abdomen, to find so little trouble with the appendix in keeping with the intensity of the symptoms (and the same may be said of ovariectomy, etc.), and has been chagrined to find so little relief following the operation. Spondylotherapy places in his possession a definite means of diagnosis. It terms them pseudo disease. By inhibiting the reflexes at their origin at the spine, we cure the cause and the organ becomes normal too quickly to be in need of operation. Here

we have a reflex irritation and no organic change.

Some Convincing Proofs

To the doubting physician we offer two experiments to test the reflexes. In the first place, firm pressure over the seventh cervical vertebra will reduce the heart beat. Secondly, if you have a case of exophthalmic goiter, you will find that concussion over the seventh cervical vertebra will cause a reduction in the bulging of the eyes as well as of the size of the goiter; while, on the other hand, constant deep pressure between the third and fourth dorsal vertebras will give rise to a corresponding bulging.

Almost positive proof of our diagnosis may be obtained from the fact that tenderness at certain spinal segments reveals disease at certain centers. Thus, for instance, tenderness over the fourth lumbar of the female would indicate uterine trouble; at the third, ovarian; if tender on the right side of the second lumbar, the appendix; at the tenth, eleventh, twelfth dorsal, the kidneys. So for other ailments. This fact ofttimes is indicative of the heavy loads of work these nerves carry and may be an effort of the ganglia to react to pathological demand.

A well-known, albeit recent, student of reflexotherapy, enthusiastic with his results, was bewailing his failure to trust its keenness of diagnosis and related an experience. "Mr. X," he said, "one of the wealthiest men of our city, called me to his home, where I found him suffering very keenly from an acute pain in the region of the appendix. My only thought was an urgent operation, until my examination of the spine failed to reveal any tenderness over the second lumbar—that is, the appendix—area, but did demonstrate extreme tenderness over the kidney segments. Fearful of risking my diagnosis of acute nephritis, I sent for the surgeon, and our final decision was to wait till morning and to operate if the symptoms did not subside. However, chemical examination by a third physician revealed unmistakable signs of nephritis, and remedies directed to the kidneys, together with spinal methods of renal stimulation, gave the patient relief before morning. Complications following the proposed operation would, I am sure, have proven fatal."

The x-ray-man has revealed that we were unable to pass the colon-tube beyond the sigmoid flexure; now, by the aid of the reflexes, he has again proven that it is possible to pass the tube to the appendix, if necessary, by pressure upon the eleventh dorsal spine, this opening the way, no force being necessary, providing the patient is in the proper erect position.

Again, we can now do what has been considered impossible: namely, pass a stomach-tube from the stomach into the duodenum by properly exciting the pyloric reflex of dilatation at the fifth dorsal vertebra. The value of this is obvious, for by its aid we can now examine the contents of the duodenum and find the extent of pancreatic and liver functioning.

The digestion of starches, with which more than one-half of all stomach troubles are concerned, can now be helped as never before by quickly emptying the stomach-contents into the intestines, where the amylolytic process can properly be carried forward before gastric fermentation can set in. Hyperchlorhydria can be robbed of its terrors and gastritis can be relieved, by reason of our ability to free the stomach of its contents.

Many who read these statements will exclaim, "Those are visions!"—if indeed they stop at such polite terms.

A friend of mine recently, after he had seen the eyes of an exophthalmic patient recede and protrude under the excitation of the reflexes, and had the same confirmed by a third physician, said, "I saw it but don't believe it."

To many who have never heard of spondylotherapy and who do not realize the splendid advances being made along reflex investigation by men who are recognized at home and abroad by reason of scientific prominence in other lines, it may be well to give a few proofs as worked out by these men, and especially by Dr. Abrams, before they gave to the world the result of their experiments.

Dr. Abrams, before the spondylotherapy convention in Chicago, performed several experiments as proof of some of his contentions. As proof that the stomach reflex is available for emptying the stomach he first palpated the stomach at rest and outlined the same with a skin-pencil. Then the subject drank a glass of water, and the doctor palpated and marked the outlines. Then he excited the pyloric reflex of dilatation, and the water passed into the duodenum and palpation showed the return of the stomach to the original position.

By experiment, stimulation at two points, i. e., at the seventh cervical and second lumbar vertebrae, was shown to change the position of the stomach by shortening. It was desired to find which could be used to the most advantage in increasing motor sufficiency of the

stomach, thus lessening a large percentage of stomach disturbances.

By introducing a toy-balloon, fastened to a tube, into the stomach, and attaching this to a manometer and inflating the walls of the stomach, the outlines of the stomach were clearly visible. One now was able to see the greatest change in the position of the stomach when exciting the reflex at the seventh cervical spine, and we now know we can treat motor insufficiency of the stomach best through the seventh cervical. Similarly other organs can be treated and findings proved as easily, if the physician will but test a few patients for his own benefit.

Many physicians claim they are exciting the reflexes by osteopathic means, others by chiropractic, and others feel they must aid spondylotherapeutic treatments by massage and Swedish movements. With these we have no quarrel; the fact merely emphasizes the cosmopolitan view with which we must in the future approach the practice of medicine.

The fact that the author uses successfully any of the above methods in his daily practice, if necessary, will merely lend force to his statement that the methods of the cults seem narrow indeed and that the practice through the reflexes of the body is yet in its infancy. It cannot supplant scientific medicine, but is its handmaid, and the greatest foe to the careless use of the unreliable galenicals and shotgun prescriptions, and of the patent-medicine vender, just as broad, scientific medicine is always a foe to quackery in all its forms.

The large list of well-known scientific medical practitioners from all over the country who recently met in national convention at Chicago, for the purpose of studying together spinal therapy, was a revelation, and no one who takes up the study today need fear he will ever degenerate into a "spine-pummeler" but, rather, he will be able to meet the demands of his patients in a new, scientific and satisfying manner.

How I Treat the Gastroenteritis of Childhood

By JAMES H. BRISTOW, M. D., Portland, Oregon

EDITORIAL NOTE.—In connection with Dr. Bristow's paper be sure to read the interesting contributions by Blanchard, Lynch, Wolverton, and others, in this issue, all dealing with various phases of "summer-complaint" treatment. Taken together, these articles form a symposium of exceeding value, and one which all of us will certainly enjoy.

IN ORDER that I may be clearly understood, let us assume that the disease in question has been in existence less than twenty-four hours, and that it is confined to the stomach and to more or less of the small intestine.

The attack is ushered in by vomiting, and, if the day is hot and the atmosphere very humid, there probably had occurred one or more convulsions. Vomiting continues whenever food is taken. There is diarrhea, unattended by pain; the bowel movements consisting of sour, green-colored stools. The skin is hot and dry, the pupil somewhat small, the temperature is moderately high. Or, if there has been a convulsion, it is very high, and there is a rapid, full pulse, I conclude that the convulsion was the direct result of the high temperature—therefore, the first and most important consideration in instituting the treatment.

If the temperature is reduced, and kept down, there will be no more convulsions. This is of the utmost importance, for, be it remembered, a severe convulsion (or several convulsions) occurring in childhood is apt to leave its mark on that individual for the rest of his life.

A cold-pack to the head will relieve the congestion of the brain and prevent more spasm, while we have at command a moment in which to consider the etiology. We now have the little one's head wrapped up completely in a big cold towel, with only his nose sticking out, so that he can breathe.

The Etiology in Relation to Cure

A glance at the etiology will give us an unfailing principle for the development of a cure. Fermentation is progressing within the digestive organs of the child, causing the production of ptomains or toxins; or, in simple words, poisons are being formed in the stomach and bowels that are making the individual sick. Therefore, if we take means to remove these poisons and take care to

introduce no more, it is perfectly obvious that the patient will be cured.

This seems so simple as to be almost unworthy of notice; nevertheless, it is a principle the application of which is practically infallible and unfailing. Even those patients in whom the disease has progressed beyond the first stages may usually be cured by putting this idea into practice.

Our sheet-anchor for the removal of the poisonous material is calomel. It should be given in tenth-grain doses, each hour, until there is a change in the character of the stools. In all instances at least one full grain should be given, no matter if the changed stools do appear before the whole grain has been given. A dose of castor oil is the logical sequence to the dose of calomel; but it is not always necessary. The vomiting will have ceased by the time the full dose of calomel is finished; provided, that the second part of the proposition is carried out; that is, that nothing has been put into the stomach to renew the poisons.

What Food Shall We Give?

There are just a few things that may be fed to such a patient without upsetting the second part of our proposition. My preference is oatmeal gruel. The gruel should be prepared with a deal of care. It should be cooked for at least three hours and when finished should resemble in appearance rich milk or cream. It may be flavored a little or sweetened with milk-sugar. No child will refuse it when it is properly prepared; and it will sustain life for many days. Indeed, I have had greatly emaciated children, who had been ill for many days, gain weight on this gruel. It is safe for at least two or three weeks' use, if necessary.

Now I have the child's digestive tract clean, have a cool pack on its head, and have had time to make some gruel (provided I did not decide to withhold all food for a while); but I have been doing some other things in the meantime, for, surely, there were other indications from the first.

Here is the time when the active principles really "do shine." The hot, dry skin and the (possible) convulsion were labeled "aconitine," just as plainly as though it were written out for one. The pupil unerringly tells one the call for atropine.

I put the granules into 24 teaspoonfuls of water: one granule of aconitine for each year of the patient's age, and one extra, *because;* and one granule of atropine for every two of aconitine. One teaspoonful of this solution is given every half to one hour, according to indications; being continued until the temperature falls, pulse quiets, nervousness subsides, when it is given every two hours, or so, apart. You may be sure that the most irritable stomach will not reject this mixture.

One Case—Medicine More Bulky Than Food!

I am reminded, at this point, of an instance where I visited a little patient, on an emergency-call, the regular attendant being unable to come at that hour. There were reposing on the table numerous vials, filled or partly filled with medicines for which prescriptions had been written. Careful inquiry about the giving of medicines and nourishment disclosed, to my amazement (spelled, amusement), the fact that the patient was taking for the twenty-four hours just twice as much volume of medicine as volume of food. Would you rather be that patient or an "alkaloidal" patient?

The digestive organs being clean and having secured the desired action of the aconitine and atropine, I now turn to a reliable druggist, writing a prescription for the combined sulphocarbolates in appropriate dosage. Additional smaller doses of calomel may be needed before the recovery is complete.

This Method Will Cure

The measures here outlined will effect a cure in nearly every case, even though it be of longer standing than the one described. I use the word "cure." It is rarely enough that we do really have a chance to use that word. There is one thing that we lack, however—a remedy that can be given almost from the first, in these cases, that would have an action similar to that of sodoxylin. I feel that it is a loss not to have some such thing. Somebody hurry and think of something that will do.

Conclusions

Bismuth and similar oldtime socalled soothing doses have no place in this scheme of treatment.

Active principles give us the opportunity to practice in our treatment the theory based upon the etiology, namely:

If the poisons in the digestive tract be removed, and no more poisons introduced, the patient will be cured.

Feeding with broths is condemned, because the extraction of broth from meat also extracts those very poisons we are so anxious to avoid.

Simplicity in the application of remedies has always done more than the most complex and laborious prescription.

Well-applied treatment the first day of the illness is so very valuable that thousands of lives would be saved every summer were it always possible to see the patients early.

You may say that I have been mixing etiology and pathology. Perhaps; but I do not think so.

Save the Babies

A "Talk" About Summer Complaint

By C. ELTON BLANCHARD, M. D., Youngstown, Ohio

SOME years ago the writer fell into conversation with an old physician about the treatment of sick babies, especially of the formerly nearly always fatal "summer complaint." We were riding in the car from Akron, Ohio, to Cleveland. It was our first meeting, and I have no doubt the doctor expressed him mind more freely then to me than he would have done to a fellow practician of his home town.

"I tell you what," said the doctor, "when they want those babies to die, they should call me. I seem to lose them every time." And so he went on bewailing his "bad luck" with babies, as he called it.

I was then a senior student, and I determined to learn, if I could, why this doctor failed with babies. I feel sure now that I know, and my hope is, to help those who "have bad luck with babies."

I have neglected to say how thoroughly this physician emphasized the fact he had always followed the treatment laid down in the books. He practiced according to rule and rote. He followed precedent. And then he could not understand the reason for his failures. Naturally, this man was thoroughly disgusted and discouraged. I have often wondered since then whether he ever did learn what was wrong about his treatment. Hope our friend is living and may read this paper.

Intestinal Autotoxemia Covers all Forms of Infantile Diarrhea

Most babies die of what may be termed diarrheal diseases. It matters little how we label the diagnosis—whether simple atrophy, marasmus, etc., for the chronic state, and cholera infantum, enteritis, etc., for the acute condition—the general term autotoxemia covers the whole thing. In brief, the pathologic state is the consequence of an invasion of bacteria of one sort or another into the digestive portion of the child's alimentary tract, and of the subsequent absorption of toxins and ptomains into the blood stream.

True, there may be ulcers and a dozen other complications. A child may be syphilitic and it may suffer from malnutrition and autotoxemia at the same time. I have recently had such a case, which several physicians diagnosed and treated as "maldigestion," but failed to recognize the lues, because the family history was good, or at least seemed good.

I am not going to discuss congenital syphilis, for that is another story. However, the keen observer will not fail to recognize the syphilitic baby when he is consulted for malnutrition. He takes nothing for granted. Bichloride of mercury will do wonders for these luetic babies—bother with nothing else. But let us return to our subject.

Two classes of baby-cases will most frequently come to you. The acute condition, called "milk-infection," and the chronic, slow-wasting disease that is called, by some, simple atrophy, marasmus or malnutrition. It is idle to classify these cases, other than as acute and chronic, because the etiology is the same, and likewise the treatment, or at least is largely the same.

Some mothers will tell you that the baby weighs less at, say, two or three months than when it was born. Examined, undressed, you will find a pale, skinny little thing, every bone of the body showing through the skin, and the latter with a peculiar transparency that might make one think of the old saying, "He is too poor to cast a shadow."

Some years ago diligent bacteriologists—Booker and Jeffries in America and Escherich and Baginsky in Germany—thought they could discover a specific bacterium for cholera infantum. These and other research-workers failed, as we might know they would; for, these troubles are an autotoxemia and usually are caused by the normal colon

bacilli invading the small intestine and there inaugurating food putrefaction.

Picture of an Acute Attack, and the Old-time Treatment

The typical picture of the acute condition is a sad one, indeed. The little patient lies with deathly pallor, eyes sunken into their sockets, and presenting that peculiar facies —fear, anxiety appealing to our pity expressed in every line and emphasized by its whining, helpless cry. Often the stomach revolts and the usual feeding process is interrupted by persistent vomiting, bringing up bile, colored or blood-tinged mucus. The mother is sure the baby is starving to death and is constantly sending down more material to add more putrefaction.

The stools soon exhibit the greenish color and musty odor, and often are watery and sometimes flecked with blood. The pulse becomes thready and rapid. The fever runs high, around 102° to 104° F., and often, in fatal cases, up to 106° or 107° F., or even higher just before death. The whining cry becomes a moaning, and the stupor or comatose state usually follows, ending in death. Now and then the sick child may show the excitable state, delirium, rolling of the head from side to side, often with it thrown back as we see in meningitis.

There, doctor is your patient; what are you going to do for the innocent little fellow?

There is no use to stop to deliver a well-worded tirade against the seemingly growing practice of bottle-feeding instead of nursing in the old-fashioned way. We need not talk about prevention, pure-milk supply, aseptic-bottle devices or any of these things. It is too late now to expound the merits of Somebody's malted milk or the value of modified cow's milk, and all that. Here is your patient. What are you going to do?

The old way was, to give calomel and laxative salines, belladonna and opium. "Administered in this way—" I quote from one medical luminary—"and, the patient *being still kept under the influence of opium*, I doubt if these medicines cause any increase of peristalsis." (The italics are mine.)

Is it any wonder the old-time doctor lost his babies?

Nature making a desperate effort, by vomiting, purging, elevation of temperature and all that, to get rid of the poisons and their cause, then this good doctor doing his best to lock up the secretions and excretions, paralyze the bowel and establish a full surrender? May heaven forgive us for all these little graves—we cannot forgive ourselves as physicians.

How the Modern Rationalist Proceeds

The rational treatment is to recognize here a toxic case, just as if the child had eaten a meal of bad food—a can of spoiled salmon, let us say. The first thing is, to stop all feeding. I am now treating the acute condition, remember. Stop piling more fuel on the fire. Not a drop of milk, good or bad. What we want, is water; pure sterile water and lots of it, inside and out. Raise Cain around the place. Tell mamma and grandma w'at's w'at! Dump all the foods, good, bad, and otherwise.

Now clean out and clean up this baby. Start at both ends. Irrigate the lower bowel —warm water and soap -good castile soap. Next use cool water and some tannic acid—about 20 grains to the pint. I have frequently used as intestinal antiseptics, the combined sulphocarbolates, for making these irrigation solutions. Later, when we have cleaned house somewhat, copper arsenite comes on the stage. It seems to help the gland-cells and restores the secretory functions.

Cool water bathing of the skin and water feeding will do much to restore the proper temperature. When the several hydrotherapy-units have been properly done, I have no objection to calomel and a saline laxative. Whether this is necessary or not depends upon how much fecal mass still may remain in the intestine. The point is, *clean out*; but don't purge just because that is the rule. If the folks think the child will starve, bluff them with barley-water or a little beef-juice.

If the fever still runs high after the use of water inside and out, control it with aconitine, digitalin, and veratrine. That admirable granule, called defervescent compound No. 1, fits most cases very well. If the child is restless and of the excitable type, a few doses of Waugh's anodyne or the "calmative for children" combinations will take the edge off the nervous centers and give the much-needed sleep.

Meantime, get after the cause by the use of intestinal antiseptics. Copper arsenite and zinc sulphocarbolate in proper dosage to suit the age of the child will usually do the business. Also, I have used, both in acute and in chronic cases, the following prescription:

[illegible] ..... grs. 1
[illegible] ..... grs. 2
[illegible] ..... grs. 2
Boroglyceride ..... dr. 1
[illegible] ..... drs. 2
Water, enough to make ..... ozs. 4
Carmine, to color.

In acute cases, give one teaspoonful every hour; and when food is resumed, a teaspoonful after each feeding. Give it after each feeding in the chronic cases. The mixture is a harmless antiferment and antiseptic and may be used *ad libitum*. In many cases of the chronic type nothing more may be needed than this medicine, unless perchance it be a help to digestion. If the intestinal trouble clears up, but the child still passes undigested food and vomits the curds, I have used with good results the essence of pepsin, essence of caroid, and other digestants.

What to do in the Chronic Type—Marasmus

In older children presenting the chronic condition called simple atrophy, or marasmus, we may have one of several complications to combat, including erythemas of several types, herpes, eczema, boils, and so on down the list; sometimes stomatitis ulcers are very troublesome. Usually, however, all these troubles disappear when the digestive tract has been restored to normal by means of the antiseptic agents.

We have in the arsenates of iron, quinine and strychnine with nuclein such a valuable combination for all eczematous skin lesions that I long ago left off prescribing Fowler's solution and other arsenic preparations. This remedy may be used in proper dosage to fit the sick child's age.

When, either in a chronic or in an acute case, the stools appear normal and the general condition is good, the rest of the battle is to insure proper nutrition. You may prefer sterilized and modified cow's milk with lime water or barley-water. Also, your patient may express some decided preferences that you may find it necessary to heed. Thus, I recall an instance where the child would retain nothing in the way of food, until we tried plain custard; on this it thrived and made a remarkable recovery. I say, remarkable, because, when brought to my care, the baby was so near the end that none of us expected to save it. In this case, normal salt solution was administered by the rectum until pulsation could be felt.

The problem of feeding I am not discussing. I am asking now for nutrition—get it by any means you can. You may rub some nutriment into the skin, such as olive oil. But, while all this is going on, *do not neglect the intestinal antisepsis*. You have not only to clean out the house, but you must *keep it clean*. Clean out, clean up, keep clean.

I am as much opposed to the use of atropine or belladonna in any form, as I am to the giving of opium in these cases. In fact, symptomatic treatment as a rule is unnecessary. Why be alarmed at a little fever? Just as in typhoid fever, there is no need to make such desperate efforts to keep down the temperature. Fasting is the nature-way of curing any intestinal disease. Fever is your index, your barometer. Why destroy it? When alarming, control the temperature—that is well enough; but for a child 102, 103 or even 104 degrees is not alarming.

Atropine suppresses the secretions, flushes the capillaries of the skin, checks the action of the leukocytes, diminishes or stops the flow of the digestive secretions, urine, and sweat. In short, atropine here does the things we do not wish done. So, why use it? Many physicians will concede the harm that follows opium in these conditions, but, still, will use atropine. Let them come forward now and give us some good reasons for this position. I am sure the editor will grant liberal space.

A Brief Recapitulation

Now to recapitulate: Autotoxemia causes most of children's troubles that are not of a contagious or infectious nature. It is the cause of most of the deaths of infants. The cause of autotoxemia is the invasion of colon bacilli and other kinds into the digestive portion of the alimentary tract, with attendant food changes other than those of digestion. The cure is made by ridding the body of putrescent material and sterilizing the digestive tract. The symptoms needing attention are easily combated when the cause is removed.

It will be some years, and perhaps some generations, under the present economic system, where poverty and unhygienic living are the rule, before preventative medicine can prevent these sicknesses in babies and children. Infant mortality is the price, or a part of the price, we pay for profits that produce two classes of our people, the rich and the poor.

There need be but few, if any, cases of this sickness in children. Yet, among the middle class or those able to live properly, we find these cases, because of hygienic and child-culture ignorance. Physicians who might teach the right way do not do so, because they do not make a living in that way. When doctors are paid to prevent sickness instead of curing it, there will be little need for such a paper as this. Indeed, I am not sure as to how many it will help even now. However, 'ere's 'oping!

Infantile Colic

How to Diagnose it and How to Treat it Intelligently

By W. C. WOLVERTON, M. D., Badger, Iowa

COLIC may be defined as "any severe paroxysmal pain occurring in the intestines" (Holt); or "any severe paroxysmal pain in the abdomen due to distention of the intestine" (Duane). "Colic" is a name for a symptom only; but it is so common in infancy, and so often requires treatment of itself, that it deserves special consideration.

Causes Giving Rise to Colic in Infants

Colic in infants may be owing to any one of many causes. It is a regular symptom of almost all the functional and inflammatory diarrheas, of appendicitis, intussusception, ileocolitis, and occasionally of ascarides when the latter are numerous and occurring in tangled masses; it may also be caused by the swallowing of foreign bodies or the seeds of fruit.

In the various conditions enumerated, colic is only *one* of the symptoms, although it may be the most prominent one. It may, however, occur without simultaneous diarrhea, vomiting or presence of foreign bodies; and here it is caused by flatulent distention of the intestine and by irregular peristalsis. The distending gases are formed by fermentative changes in the food-contents of the alimentary canal. It may occur both in breast-fed and in artificially fed babies, but is more common in the former class. In either case, the food generally contains some indigestible constituent, and this usually is the proteid.

In colicky, bottle-fed infants, excess of proteid content of the food is shown by the presence of undigested curds in the stools. Fully 80 percent of the colic in early infancy in artificially fed children results from this cause. Excess of carbohydrates also may produce colic, which is then accompanied by thin, green, very acid stools, these sometimes causing marked irritation of the nates. It is in rare cases only that an excessive fat-content in the food gives rise to colic.

As already remarked, colic is most commonly seen in breast-fed infants, and it occurs with greatest frequency during the first three months of life. Here again the great majority of attacks are due to excess of proteids in the mother's milk.

A very prolific cause of colic, both in breast-fed and in artificially fed infants, is overfeeding, both as regards quantity and frequency of feeding. But very little attention is paid by mothers and nurses to the cultivation of good nursing-habits in babies. The almost universal prevalence of irregular and unsystematic feeding of infants is shocking alike to the pediatrist and the general practitioner who are honestly trying to teach the laity the importance of *system* in this respect. How often we see the nipple poked into an infant's mouth every time it cries, as if a baby never cried from any cause other than hunger! In colicky babies, nursing gives temporary relief, because of the entrance of the warm milk into the stomach; but in the end this practice only adds to the trouble by overworking the digestive apparatus and adding to the preexisting indigestion.

Too rapid nursing causes colic, because the infant then is likely to swallow much air. In like manner, a rubber nipple that has been used for a long time becomes too patulous, and, so, permits too rapid feeding, this, consequently, giving rise to colic.

Many outlandish varieties of food partaken of by the mother, such as onions, beans, and cabbage, affect the nursing baby through the milk and cause colic.

The mental state of the mother has a marked action upon the composition of the milk; worry, anger, and grief in the mother frequently cause colic in the nursing baby.

If menstruation occurs during the period of lactation, the nursing infant is quite likely to be fretful and colicky, and may fail to gain in weight or even lose weight during the menstrual week. Also, if the mother of a nursing baby again becomes pregnant during lactation, the nursing infant is very likely to have a serious digestive upset, with colic as the prominent symptom.

If the abdomen and extremities of an infant are not properly protected against chilling, colic may be the result, through disturbance of circulatory equilibrium.

The Signs of Flatulent Colic of Infants

During an attack of colic, the child cries sharply and persistently, flexing its legs and

thighs, in an endeavor to expel the gas. In male infants, there is retraction of the scrotum, owing to stimulation of the cremasteric reflex. The abdomen is distended, tense and hard; massage usually resulting in the expulsion of considerable quantities of gas through the anus, which relieves the pain and quiets the child.

It is difficult, sometimes, to distinguish the cry of colic from that of hunger, as babies suffering colic pains will usually nurse eagerly, with temporary relief; but the attack soon recurs, and often with greater severity than before. The cry of hunger, it should be observed, is prolonged and continuous, and is not accompanied by the other symptoms mentioned as indicative of colic. The cry of colic, on the other hand, is violent and paroxysmal.

Conditions Liable to Be Mistaken for Colic

There are a number of conditions from which it is necessary to distinguish the flatulent colic of infants.

The first of these misleading conditions, named in chronological order, that is prone to occur after birth, is a peculiar form of *renal colic*. During the latter part of the infant's intrauterine existence, as the result of fetal metabolism, crystals of uric acid and urates are deposited in its kidneys. As soon as the child takes up an independent existence and renal secretory activity starts, these sharp crystals begin to pass down into the pelves of the kidneys and on down the ureters, giving rise to considerable pain and irritation; quite severe traumatism may take place, even to the extent of producing hematuria. The ingestion of plenty of hot water, with perhaps a few drops of spirit of nitrous ether, quickly effects the solution and excretion of the offending crystals, and cures the "colic." If this treatment is not carried out, the attack usually persists for three or four days.

Acute appendicitis occurs in infancy with much greater frequency than generally is believed, and, unless promptly recognized, leads to numerous deaths, which, because of faulty diagnosis, are ascribed to other causes; and this condition, in its early stage in infancy, is particularly liable to be mistaken for flatulent colic.

The pain not infrequently is referred, in the beginning, to the epigastric or umbilical region; but careful palpation will show the point of *greatest tenderness*, and usually of rigidity, to be located in the appendical region. A blood examination will show a more or less pronounced leukocytosis. In appendicitis, a glycerin suppository or an enema does not give the relief that it does in colic, because it does not remove the cause of the pain. Elevation of temperature will usually, although not invariably, be found present in appendicitis, while it is practically never seen in simple flatulent colic. Early diagnosis and prompt surgical treatment are absolutely essential in this condition, as also in the one next to be considered, if these little ones are to be saved.

Intussusception is peculiar to infancy and early childhood. Here, in addition to the colicky pain, bloody stools are nearly always to be seen. In practically all cases, blood, bloody stool, bloody mucus or bloody serum is present. Still, the classical "sausage-shaped tumor" often cannot be palpated through either the rectum or the abdominal wall. However, if the characteristic mass can be made out, and blood passes per rectum, the diagnosis of intussusception is clear, and surgical treatment should be instituted immediately; although, in a few cases, the telescoping may be reduced by distending the bowel with air or water. But, the condition tends to recur; and much valuable time may thus be lost, or the intestine be ruptured, with certain death as the result.

A degree of shock and prostration never observed in colic is present in intussusception. In cases of more than two or three hours' duration, there is always an acceleration of the pulse-rate and an elevation of temperature of from 1.5 to 2 degrees in intussusception, owing to the absorption of some of the decomposed, foul-smelling, bloody rectal contents.

Strangulated hernia gives rise to paroxysmal abdominal pain; but the hernial protrusion always is readily discernible if a careful examination be made.

Intestinal obstruction may result from a variety of causes other than intussusception and strangulated hernia, and will give rise to severe colicky pain; but visible peristalsis, fecal vomiting, obstipation, and "rumbling" preceding the spasms of pain are differential diagnostic signs of importance.

Peritonitis, from whatever cause, may at first simulate colic; but soon fever and the other constitutional signs of septic absorption make the difference clear.

Ptomaine poisoning might be mistaken for colic; but here we can obtain a history of the ingestion of decomposing food. There

are present diarrhea, tenesmus, and marked prostration, with muscular cramps in the extremities. Closely akin to this is acute milk poisoning ("cholera infantum") in bottle-fed infants. Here the extreme prostration, rapid emaciation, and the passage of enormous quantities of serum from the bowel should make the diagnosis clear.

Irritant poisons, especially the arsenical "rough-on-rats" and phosphorus from the heads of matches, occasionally are picked up and eaten by creeping infants in their travels over the floors of the home. The "garlicky" odor of phosphorus on the baby's breath, should make the diagnosis easy.

Sometimes persistent crying is induced by the pricking of a pin; even "safety"-pins have been known to become unfastened and intrude their points into the infant's skin. Exclude this possible cause of pain and crying, and hunger and thirst as well, before making a diagnosis of "colic."

Tuberculous caries of the spinal column often give rise to severe epigastric pain; still, if a *thorough* examination of every persistently crying baby were made, it should not be hard to differentiate this condition from flatulent colic. Furthermore, if treatment is instituted before more than a small degree of spinal curvature has taken place, the results, as a rule, are extremely satisfactory.

Intestinal worms are not as frequently a cause of abdominal pain as is supposed by the laity; nevertheless, it may, when a large number form a tangled mass. The ova of the parasite are readily found by a microscopic examination of the stools; or a vermicide (santonin) may be administered if the presence of ascarides is suspected.

Henoch's purpura is a puzzling source of paroxysmal abdominal pains. Yet, here the cutaneous petechiæ and ecchymoses, together with free hemorrhages from the bowels and mucous membranes, should put the observer on the right track.

Tubercular peritonitis, tubercular involvement of the mesenteric lymph-nodes, and tubercular infiltration of the omentum give rise to severe abdominal pain. However, the abdominal parietes of an infant are so thin that any tubercular nodules should be readily made out by palpation, especially if the child be placed for fifteen or twenty minutes in a bath at a temperature of 105° F. The von Pirquet and the Moro tuberculin reactions are exceedingly simple of application, and are of unquestioned significance in infancy.

Intrathoracic inflammatory conditions, such as pneumonia and diaphragmatic pleurisy, not infrequently are characterized by a pain that is referred to the abdomen. It is the part of wisdom carefully to examine the chest in all instances of severe abdominal pain. The pulse-respiration ratio should be of diagnostic significance in such cases. Frequently such intrathoracic troubles have been diagnosed as "appendicitis," and were operated upon as such.

Foreign bodies swallowed by creeping infants may cause colicky pain. I well remember my surprise, a few years ago, upon examining a Russian baby in North Dakota, when I found its rectum tightly packed with sunflower seeds which the child had swallowed. Recently another baby swallowed three safety pins, all closed and fastened together, the chain having a total length of 3 1-4 inches. As it was, the pins made an uneventful passage through and exit from the baby's interior, except for a mild "colic."

The Treatment of Infantile Colic

The treatment of infantile colic should be, first of all, prophylactic. I believe it is quite customary to say that—it sounds so easy. But many of these cases of "three-months' colic," as the old ladies call them when chronic, are far from being easy to cure. However, if an otherwise healthy infant is furnished with proper nourishment, in proper quantity, and at proper intervals, colic, happily, is likely to be an unknown quantity.

As remarked in discussing the etiology of this troublesome condition, colic occurs more frequently among breast-fed than among the artificially nourished infants; also, that overfeeding is a prolific cause of the trouble. If babies are from the beginning regularly nursed at stated intervals, instead of whenever they cry; and if they are not allowed to nurse longer than fifteen minutes at each "sitting," so that overfeeding is prevented, instead of allowing them to suck and doze, and suck and doze, for an hour at a time; then the troublesome attacks of colic will, in the great majority of babies, be obviated.

If the mother's nipples are but poorly developed, the baby, naturally, will swallow a great deal of air in its attempts at nursing. If that is the case, the mother should be instructed to make systematic efforts to "draw the nipples out." Meanwhile a proper nipple-shield should be provided; and this, by the way, must be as consistently sterilized as is necessary with the rubber bottle nipples.

In bottle-fed infants, the small opening in the rubber nipple, after the latter has been in use for some time, may become too patulous, thus permitting of too rapid feeding, and, so, predisposing to colic. The remedy is obvious.

When undigested curds appear in the stools, indicating an excess of proteid in the food, the remedy is simple in the case of artificially fed children; the proportion of milk in the mixture is to be reduced, while lime-water may be added, to encourage the formation of lighter and more flocculent curds. The addition of sodium citrate to the milk-mixture has a similar effect. When there is an excess of proteids in the mother's milk, her diet must be regulated, the amount of meats and other albuminous foods being reduced; the mother should also exercise freely, and drink considerable quantities of water.

In bottle-fed children, when colic comes from an excess of carbohydrates, as is shown by the thin, green, acid stools, the remedy is quite obvious: reduce the quantity of sugar in the milk mixture. Lactose or maltose, or a mixture of both, with perhaps some dextrin, are the proper carbohydrates to employ; cane-sugar, very rarely, if ever, as few infants can tolerate it before the end of the first year at the earliest. The amount of lactose in mother's milk remains quite constant, and rarely requires modification.

When the proportions of all the constituents of the food seem normal, try reducing the total quantity of food given the baby. Cure constipation, if it exists; a useful remedy is the mixture of rhubarb and soda, 1-2 to 1 dram three times a day. The anti-constipation granule devised by Dr. Waugh also works nicely in many cases.

Treat Any Digestive Trouble

When recurring attacks of colic are the result of chronic intestinal indigestion, treatment must be directed at the underlying disease, the cause being removed, if possible.

If a breast-fed infant is persistently colicky, one should not be too quick to urge that the child be weaned and put upon artificial food. An effort should be made to modify the mother's milk, as heretofore described. Should this not avail, properly modified cows' milk is undoubtedly the best substitute, provided that a pure, clean article can be obtained.

It should be unnecessary, of course, to state that nursing-bottles and nipples must be kept *sweet and clean*, and that special care must be directed to this end during the heated months. Furthermore, a nurser should be employed, the nipple of which fits directly over the neck of the bottle, that is, without the intervention of a "length of garden-hose," as one of my teachers used to put it.

Relieving the Actual Attack

For the treatment of the immediate attack, a number of remedial measures are useful. Hot peppermint-water, or a little brandy and hot water, or soda and hot water, given by mouth, will assist in removing the gas from the stomach. An enema of warm water or a glycerin suppository is most effectual in relieving the bowels of gas.

Hot applications to the abdomen are very soothing. So, also, a flannel cloth wrung quickly from hot water in which has been steeped a mixture [in a bag] of the various household spices, applied to the abdomen and covered with a dry cloth to retain the heat, is efficacious in relieving an attack.

Massage of the abdomen is a useful measure, and gives relief by aiding in the expulsion of intestinal flatus. Moisten the hand with warm oil, and grasp the abdomen with the fingers, in constantly widening circles from the umbilicus outward, finally moving along the course of the colon, to press the gases out in this way.

For the quick relief of the pain, an excellent remedy is the "anodyne for infants" granule, made after the formula of Dr. Waugh. (Nickel bromide, gr. 1-128; codeine sulphate, gr. 1-64; emetine hydrochloride, gr. 1-5000; lithium carbonate, gr. 1-16; oil of anise, gr. 1-128.) One or two granules, dissolved in a teaspoonful of hot water, are to be given every ten to fifteen minutes, to effect.

Many authorities recommend the use of chloral hydrate, and, while its use ordinarily is unnecessary and contraindicated, nevertheless, when there is great pain, with frequent repetition of attacks and almost total loss of sleep, its temporary administration as a palliative measure is justified. From 5 to 7 1-2 grains may be given, in an ounce of warm water, as an enema.

While paregoric has long been popular, in the lay mind, for painful troubles of this character in infants, it is a remedy unwise to employ, and should always be reserved until after simpler measures have been tried and have failed.

Cystoscopy and Ureteral Catheterization

By HARVEY ADAMS MOORE, M. D., Indianapolis, Indiana
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PROMPT and accurate diagnoses are the distinguishing features in the use of the cystoscope and the ureteral catheter. The tremendous importance of an instrument accomplishing such a purpose, applicable to conditions where in the past diagnosis often has been slow and uncertain, need not be urged upon members of the medical profession.

The general adoption of cystoscopy and ureteral catheterization in urological diagnosis cannot be too greatly encouraged, and a few words here in regard to the value of these two methods may not be amiss.

The necessity of diagnosis by the older methods, which depend upon the subjective and objective symptoms in clinical observation, remains for those few instances where cystoscopy is impossible, and this may be due to stricture, urethral tortuosity, susceptibility to hemorrhage, filling of the bladder by neoplasms, very small bladder capacity, or enlarged prostate gland. Putting aside these exceptional cases, I will mention briefly the procedure which I follow in making examinations with the cystoscope and ureteral catheter and the conditions to which they are applicable.

Method of Examination

As a rule, the cystoscope may be introduced with but slight discomfort to the patient. The condition of the bladder is first noted and a close observation made for vesical complications. Particular attention should be paid to the vesical neck, especially in men who exhibit prostatic symptoms, as it is with the careful use of the cystoscope that we can hope to recognize the early symptoms of carcinoma of the prostate. This done, the mucous membrane around the ureteral orifices should be examined and close investigation made of the size and shape of the ureteral openings. The mucous membrane at the lips of the ureters may be more or less prolapsed, or the lips themselves may be pouting or thickened, or the orifice may fail to open and close normally as the urine is emitted.

The character and quantity of the urine and the interval between spurts should be determined. Careful note should be made of any difference that may be apparent between the two sides. From this point, the examination should be carried on with the ureteral catheter, by which separate urines may be obtained for microscopic and chemical examination. Dilatability of the renal pelves and the length of the ureters may be estimated with the ureteral catheters. It is also often important to inject into the kidney some silver salt for x-ray examination.

The Value of the Method

The method here outlined enables diagnosis in kidney affections which the most careful clinical observation can only leave in doubt. Renal tuberculosis, renal and ureteral stone, atrophic kidney, hydronephrosis, pyonephrosis, pyelitis, pyelonephrosis, unilateral nephritis, single kidney, renal hematuria, all present conditions which may be diagnosed correctly by the use of the cystoscope and the ureteral catheter.

Relative to the single kidney and to cases in which one kidney, or both, may be so badly affected as to prevent proper renal elimination, the use of the cystoscope and ureteral catheter must be most emphatically urged. It is a crime, with this instrument at command, to undertake a kidney operation, unless the functional capacity of each kidney is determined.

The older methods of diagnosis may lead to serious entanglements in surgical cases, out of which the patient, if he comes at all, will, at the most, escape only by the narrowest margin, and even then, perhaps, only to suffer. It is necessary that the surgeon, before attempting nephrectomy, know the exact condition of each kidney; otherwise, the operation may leave the patient with a diseased organ to perform renal elimination, and death will result in a short time. The cystoscope and ureteral catheter solve all of these difficulties before the operating-room is reached.

Cystoscopy Prior to Litholopaxy

Before and after litholopaxy the cystoscope is invaulable. Although the stone-searcher may be of great value, it cannot be definite and accurate, as is the more modern

*Read before Randolph County (Indiana) Medical Society.

instrument. The cystoscope will reveal the exact number and size of calculi and the condition in which they exist. After the stones are crushed and washed out, a final examination with the instrument in question will prove whether the bladder is entirely clean, and, if not, will reveal the size of any fragments that may remain. This is of especial importance, as the smallest particles left in the bladder will form the nucleus for more calculi.

Cystoscopy should be resorted to invariably in cases of tumor of the bladder. The subjective and objective symtoms cannot demonstrate the condition satisfactorily in any case, and certainly rarely with sufficient definiteness to warrant operative procedure. By the newer methods, the tumor or tumors may usually be seen, and the location, size, form, and character in detail accurately determined.

It has been asserted by some surgeons that the cystoscope has no value for inspecting prostatic hypertrophy, but the truth of such statements may well be questioned. As a rule, even if not always, the condition of the intravesically hypertrophied prostatic lobes may be observed. Before performing prostatectomy the writer makes it a rule to cystoscope the patient, and he has found that the information gained with the cystoscope has been invaluable whenever prostatectomy was done.

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The Treatment of Rhinophyma

By E. A. FISCHKIN, M. D., Chicago, Illinois

EDITORIAL NOTE.—In the Miscellaneous Department of this number of CLINICAL MEDICINE, *on page 685, you will find a brief clinical report of a very severe case of rhinophyma, with a photograph of the patient. This photograph and description were submitted to Dr. Fischkin, with the request that he tell the "family" something about the treatment of this disfiguring malady—one that is very common and too often goes untreated. Acceding to our request, Dr. Fischkin very kindly prepared the paper which follows.*

THE photograph which you have sent me illustrates very well a case of rhinophyma—a most torturing disease, indeed, and one that, as the doctor aptly says, "is capable of converting an energetic business man into a recluse, for the reason that he wishes to avoid meeting people and hearing whispered remarks that are so constantly made in his hearing."

Although benign in character and of a nature that ought to put no stigma upon the patient, this disfiguring affliction is, nevertheless, a source of great moral suffering to the victim, by reason of its presumptive association with addiction to alcoholics. This very doubtful etiologic factor, so very generally accepted by the public, was assumed even by great authorities, albeit without safe foundation. Thus, the French surgeon Ollier, for instance, ascribes it to overindulgence in the use of red wine, while the Austrian dermatologist, Kaposi, goes even so far as to say that from the color of the nose he could guess in what direction the taste of a patient went as to wine or beer or whisky.

It is unfortunate that so high authorities have laid the foundation for a prejudice so detrimental to the patients; for a rhinophyma does not stigmatize the victim any more than does a lipoma or a fibroma. Indeed, it is a tumor-formation, in all probability a cystadenofibroma (so called by Lassar and by Czerny), and has little to do with indulgence in alcohol. Even acne rosacea, with which this disease is so generally identified, and of which it is claimed to be the terminal, or third, stage, is a very doubtful etiologic factor; for, acne rosacea occurs mostly in women, while rhinophyma is met with in men only.

Microscopically, we find a hyperplastic growth of all the layers of the skin, especially of the sebaceous glands and of the connective tissue, with an associated round-cell infiltration, thus suggesting an inflammatory process; still, we have no clue as to the etiology.

All manner of treatment has been experimented with for the removal of this disfiguring facial condition, including exfoliation, cauterizations by every means, injection of

fibrolysin, x-ray radiation, mercury-vapor ultra-violet rays, radium emanation; also, among purely surgical means: excision and suturing, transplantation, and decortication.

For both the purely dermatological and the purely surgical methods good results have been claimed. The truth lies, probably, here as anywhere else, in the middle. The disease is curable, no doubt, by a variety of methods. But of the best cure we must demand the best cosmetic results; that is, it must remove the disfigurement without leaving any marked alteration in the new-formed skin.

This latter requirement is accomplished only by a combination of surgical and dermatological means. Radiotherapy in small dosage does not suffice, and it is risky if applied in excessive doses. Thermo- and electrocautery leave scars which may prove not less disfiguring than the trouble itself. Ablation of the entire diseased skin of the nose, followed by skin grafting, may possibly restore a shapely nose, but will leave a white, scar-like cuticle deprived of glands and normal vascularity. The best method, therefore, is the socalled decortication of the skin, followed by exfoliation. This I will now describe.

Decortication Is Recommended as the Best Treatment

In undertaking decortication for the cure of rhinophyma, proper preparations for aseptic operation are absolutely essential. The skin of the nose and adjacent parts first of all is effectively cleaned with tincture of soap, followed by alcohol and ether, and disinfected with a 10-percent solution of tincture of iodine. General anesthesia is not necessary; the local infiltration-anesthesia, however, must be perfect and complete.

From a point at the root of the nose, a 1-percent novocaine-suprarenine solution (distilled water, 100 Cc.; novocaine, 1 Gram; sodium chloride, 0.8 Gram; adrenaline chloride solution, 1 : 1000, 10 minims) is injected deep into the subcutaneous tissue toward the base of both sides of each ala and sidewards into the region of the canalis infra-orbitalis on both sides. From a point in the nasolabial folds, the subcutaneous tissue of the upper lip is infiltrated. The deposition of the solution is to be made deep at the back of the nose down to the periosteum. This is necessary, because otherwise the solution may be pressed out again by the dilated pores and thus render the anesthesia illusory.

The nose now is frozen with the ethyl-chloride spray. The freezing must be done from many points at one time. Two assistants hold the ethyl-chloride flasks, and direct the anesthetic sprays upon the nose and adjacent areas, care being taken that the patient do not inhale the vapor, by stuffing the nostrils with cotton, while also covering the eyes and mouth with impermeable tissue. The spraying has to be continued till the nose is frozen in its entire thickness down to the cartilage, this taking about four or five minutes. In this condition, the nose assumes the consistency of a raw potato; and at this stage the novocaine-anesthesia begins to exert its effect.

Now put the index-finger and thumb of your left hand into both nostrils (so as to have control of the thickness of tissue which is to remain) and with the sharp blade of a razor cut off all tumors and shave off the entire thickened skin down to about 1 1-2 to 2 millimeters (not more!) above the cartilage. (The object of these directions is, to leave the fundi of the sebaceous glands as a source of future epidermization. Even in the frozen state these fundi are easily recognizable.) While cutting, the form of the nose is shaped in accordance with its previous contours, this being ascertained, if possible, by means of old photographs. On both sides of the nose semi-circular V-shaped incisions are made, to secure the reappearance of the nasolabial folds.

Now put iodoform-gauze tampons into both nostrils and press the bleeding surface with compresses moistened in the novocaine-adrenaline solution for about ten minutes; which usually stops the hemorrhage. If bleeding be somewhat profuse, use a styptic powder of this composition:

Acidi tannici	1 Gm.
Aluminis	1 Gm.
Colophonii	1 Gm.
Gummi arabici	1 Gm.

After the hemorrhage is controlled, cover the raw surface with a few layers of sterile gauze and fasten this with adhesive plaster. These dressings, as well as the iodoform-gauze tampons from the nostrils, are removed for the first time after three days, by which time epidermization already has begun. The dressing now is moistened with hydrogen-peroxide solution and carefully removed, so as not to rupture the tender new epithelium. If epidermization proceeds slowly, it can be stimulated by painting with tincture of iodine and reapplying the previous dressing for another three days. As a matter of fact, however, formation of the epidermis will be too rapid and it may be necessary to keep it

somewhat down, in order to insure a smooth, even surface. This object is accomplished by applying a weak reducing paste, as follows:

Resorcin	1 Gm.
Ichthyol	1 Gm.
Zinc oxide	4 Gms.
Precipitated sulphur	1 Gm.
Fuller's earth	1 Gm.
Olive oil	2 Gms.
Benzoated lard, enough to make	30 Gms.

The amount of resorcin is varied according to the necessity of reducing epithelization. If the skin be too thick in parts or if parts of the protuberances be not entirely removed, they can be exfoliated by increasing the amount of resorcin up to 50 percent, according to the depth of destructive action desired. In this way a perfectly smooth and normal-appearing new skin can be secured. Of course, the nose will be somewhat larger than normal, on account of the preceding enlargement of all its structures, and the cartilage will also be softer than normal, as is usually the case in old rhinophymas; nevertheless, the patient will be freed from his disfigurement and his olfactory organ be made less conspicuous.

The whole treatment can be done in a period of about two to three weeks, and without laying up the patient.

Milk and Its Care for the Baby

By CHARLES F. LYNCH, M. D., Philadelphia, Pennsylvania

Home Pasteurization

WITH the advent of the hot weather, one of the greatest problems, especially in those cities where there is an imperfect system of milk inspection, which the physician has to face is the proper regulation of the milk supply of the young infants, whose health and happiness depend upon our efforts.

Of course, the ideal milk supply would be a properly safeguarded certified milk; and this form of milk production and the regulations necessary for obtaining the same I shall discuss in a subsequent paper. But comparatively few of our cities thus far have a certified-milk supply, and even in these the cost often is so high as to make the milk prohibitive in those families where it is needed the most—the poor.

In the summer months the raw milk delivered in cities where there is no compulsory enforcement of a sanitary standard frequently contains myriads of bacteria and, hence, is not a safe food for young children—most emphatically not for infants whose food consists entirely of milk. The annual toll of summer-complaint victims is a crying example of the effects of pouring into these little stomachs pure cultures of virulent microorganisms. The infant mortality in any community is usually an excellent guide to the purity of the milk in that district.

How are we to protect these little ones? What can we do? The answer is simple—Pasteurize the milk!

But, you will say, this requires a lot of expensive machinery and we have no power to force the dairyman to go to this added expense.

True enough, pasteurization on a large commercial scale does necessitate considerable outlay for equipment; but for the purpose of protection of the infant we can accomplish remarkable results independent of this outlay, and at a very trifling cost.

Pasteurization of the milk in the home is an entirely feasible operation, and one that can be carried out, at very little cost, by the use of a simple improvised outfit.

The essential aim in the pasteurizing process must be the destruction of all pathogenic bacteria, such as the tubercle bacillus, diphtheria bacillus, and the typhoid organism, and also those organisms which are commonly concerned in the production of the summer diarrheas of infancy, namely, the streptococcus and staphylococcus. It must also be borne in mind that the milk is not to be subjected to such a high temperature as will destroy the natural flavor or inactivate the natural enzymes, thus detrimentally influencing its nutritive value.

Pasteurizing at Home

For the home pasteurization of milk, all the equipment that is necessary is a small tin pail, say an ordinary lard-pail with a perforated false bottom or a small wire bottle-holding rack suspended from the sides of the pail by means of wire loops. Such a rack or bottle-holder can be supplied for ten or fifteen cents at any tinshop; or, a false bottom can be improvised by taking a pie-plate, inverting

this in the pail and punching holes in it so as to allow of the free circulation of the water. The object of this false bottom is to allow the water to circulate freely on all sides of the bottle and also to prevent jarring together or breaking of the bottles.

The milk-bottle, as received from the dealer, is placed into this home pasteurizer. No special bottle is necessary; and the process is best carried on in the original bottle, as it decreases the danger of contamination. After the bottle has been placed in the pasteurizer, fill the pail with cold water and place on the stove, or over a gas-burner, if a gas-stove is used. To regulate the temperature, it is best to have a thermometer that can be placed in the milk-bottle, and to suspend it through an opening in the bottle-cap. This is not essential, however, and quite as good results can be obtained without it, if a little care is used to prevent overheating.

Pasteurization not Sterilization

It must always be remembered, in this connection, that pasteurization and not sterilization is the object aimed at. There is a widespread erroneous conception about pasteurization. Especially among the laity is the opinion prevalent that to pasteurize milk means boiling the milk. This is entirely wrong, and one of the things to guard against is this very overheating or boiling.

If the milk is heated to the boiling-point, then the natural ferments of the product are inhibited or destroyed and the milk becomes unfit for use as a food for infants, thereby giving rise to various digestive disturbances, as well as showing decreased nutritive value. Insist and reinsist that the mother, or whoever is entrusted with the carrying out of the process, understand that she is not to boil the milk. Unless this is done, over fifty per cent of the mothers will boil the milk, and you will arrive at the conclusion that pasteurized milk is not a good food for babies, when in reality you will have been using no pasteurized milk at all, but sterilized milk instead.

The proper method is to bring the water in the pail to the boiling-point; or, if a thermometer is used, heat until the milk is brought above 145°, but not exceeding 150° F. When the water begins to boil, remove the pail from the fire and cover it over loosely with a towel and allow to stand for about thirty minutes. In this way, the milk is held at a high temperature sufficiently long to destroy the major portion of the bacteria present.

Cooling the Milk

Now comes the second, and most important, step in the process, namely, the cooling of the milk. This part is most important, because it is most often neglected. A great many people seem to act upon the theory that once milk is heated to pasteurization-temperature nothing can render it unsafe afterward. But this is entirely wrong. It must be remembered that all the bacteria are not destroyed in this heating process. Those microbes that remain are only too eager to reproduce—and do so very rapidly if given a favorable chance, such as would be afforded by allowing the milk to remain warm.

Thirty minutes after removing the pail from the fire add half-cold water to the pail, and then gradually add cold water until the milk is as cold as it is possible to get it. Have it kept in cold water or, better still, on ice until used. Never allow a bottle of pasteurized milk to stand in the sun or on the kitchen-table, with the cap off, as is commonly the practice in the average home.

In the case of infants, the modified-milk mixture can first be made up and filled into the bottles, having as many bottles as there are to be feedings in the day. It is a wise provision to have one extra bottle, in case one should be broken in the process. Place all the bottles, after they have been filled, in the pasteurizing pail and heat as above described—and remember, do not boil. Allow to stand thirty minutes; cool rapidly, then place on ice. Each bottle, just immediately before use, may be warmed up to lukewarm temperature.

Objections to Sterilized Milk

Many objections have been made to pasteurized milk. It has been maintained that the feeding of milk that has been pasteurized tends to the development of rickets and marasmus. However, it would seem that the weight of clinical evidence does not sustain this claim; and in justice to the helpless infant, who often must depend for his food supply upon a cow a hundred miles away from his home, we should avail ourselves of such a simple method of insuring at least a relative degree of bacterial purity.

The one big precaution is, to avoid overheating and boiling, and to remember to keep the milk cool after pasteurization has been completed.

WHAT OTHERS ARE DOING

VALUE OF AUTOGENIC VACCINES

The greatest service from autogenic vaccines is obtained, according to Drs. T. and G. Scott (*The Lancet*, Sept. 21, 1912) in chronic urethritis following gonorrhea, and in chronic bronchitides, the result of pneumonia.

THE WASSERMANN REACTION IN THE CEREBROSPINAL FLUID OF PARETICS

According to P. Kirchberg, of the insane asylum of Frankfurt a. m. (*Arch. f. Psych.*, No. 3, 1913; through *Muench. Med. Woch.*, No. 16, 1913), in 100 patients afflicted with paralysis [paretic dementia], the Wassermann reaction was positive in 78 percent of specimens of cerebrospinal fluid, and in 93 percent of the blood-tests.

APPENDICITIS IN CHILDREN, AND WORMS

In a review of the subject of appendicitis, appearing in a recent number of the *Allgemeine Medizinische Wochenschrift*, Green points out the striking proportion of the presence of intestinal worms found in children attacked by that disease, this being 30 percent of a total of 60 such patients treated.

BLOOD INJECTIONS, INTRAMUSCULARLY IN ANEMIA

While no rational explanation is offered by the author, J. v. Zubrzycki, of the Universal-Frauenklinic at Vienna, he reports (*Wien. Klin. Wochen.*, 1913, p. 95) having seen considerable benefit resulting from the intragluteal injection of defebrinized human blood for the relief of acute anemia, in six women, consequent upon severe metrorrhagia; improvement coming *pari passu* with the repetition of the treatments.

The fresh blood, drawn from robust healthy pregnant women (inmates of the hospital), was defebrinized and injected, at three- and four-day intervals, in amounts of 20 to 30 Cc. The procedure is simple, painless, and harmless; and no unpleasant effects were observed.

DROP-PERCUSSION: A NEW METHOD

O. Lerch praises (*Deut. Arch. f. Klin. Med.*, No. 1, 1913; through *Muench. Med. Woch.*, No. 16, 1913) a new method of percussion as developed at the pathologic institute of the Augusta Hospital at Berlin. He terms it drop-percussion (*fallpercussion*), the implement being the ordinary plessimeter and plessor; but, instead of striking with the hammer, he allows it to fall, or drop, upon the plessimeter.

The claim is made that, while the art is readily acquired, absolutely accurate anatomical information can be obtained in this way, not to be compared with the present mode, as, for instance, the condition of the thymus in children, of the pericardium, larger vessels, kidneys, etc. The details must be read in the original (lengthy, illustrated) article.

PRIZE OFFER FOR THE CURE OF TYPHOID-CARRIERS

In view of the extreme importance of the problem, a wealthy German citizen (not identified by the Prize Committee) has offered a prize of 10,000 marks to anyone, without reference to nationality, who has developed a method of positively and permanently curing typhoid-carriers within a reasonable period of treatment.

The thesis must be in the hands of the Committee not later than October 1, 1914; and the aspirant must furnish proof that for at least six months subsequent to the treatment no typhoid germs were discoverable in the stools and the urine of the individuals treated by this method. If no fully satisfactory cure should be presented, then the Committe is empowered to award a fractional sum. The verification must be concluded by June 15, 1915.

The Prize Committee consists of Prof. Dr. v. Schjerning, surgeon-general of the Army; Prof. Dr. Ehrlich, Frankfurt; Prof. Dr.

Gaffky, Berlin; Prof. Dr. Hoffman, of the Ministry of War. (*Der Militaer-Arzt*, No. 10, 1913.)

ABORTION AND PROPHYLAXIS OF FURUNCLES

A forming furuncle can be aborted, according to Schuele (*Muench. Med. Woch.*, No. 45, 1912), by the electrocautery, if taken within the first forty-eight hours. The cautery-needle is to be inserted deep in the center of the induration, after having induced anesthesia by infiltrating the surrounding tissue with the obtunder of choice and then injecting vertically and deeply into the center. The small wound resulting is closed, and at the same time drained, by means of twisted wicking.

In cases of furunculosis, the author recommends Haegler's method of prophylaxis by effecting disinfection of the skin-area involved; namely: After epilation, rub well into the skin Crédé's ointment of mercury. Next day clean the cuticle thoroughly, first with the alkaline soap liniment of the German Pharmacopeia, then with absolute alcohol [Would not 70-percent alcohol be better?—Ed.]; after which repeat the mercury inunction. It seems that this procedure is to be carried out for two weeks, when ointment of zinc should be substituted for that of mercury.

American physicians have seen so many illustrations of the value of staphylococcus bacterins in the treatment of furunculosis that they are not likely to overlook these powerful agents. In every case where there is a tendency to the occurrence of "crops" the bacterin treatment should be employed. Also, calcium sulphide—don't forget that.

DIAGNOSTIC VALUE OF EMETINE IN DYSENTERY

As every physician knows there are two classical forms of dysentery; (1) the bacillary form, due to infection with the Shiga-Kruse bacillus, or to some closely related organism; (2) the amebic form, must common in tropical and subtropical regions. The first form is usually acute in type and attended with fever; in the amebic form pyrexia is uncommon, except when there is a forming hepatic abscess.

It is interesting to know that, according to Sir Charles Pardey Lukis (*British Medical Journal*, page 1358, June 28, 1913), the hypodermic injection of emetine will clear up the diagnosis. Says Sir Charles: "If you have a case which you suspect to be amebic dysentery, but which does not react to emetine within three days, you may be sure that your diagnosis is wrong, and you need waste no further time in treating it as such. Moreover, the powerful effect of emetine on amebic cases, compared with its uselessness in bacillary cases, may, I think, be taken as strong proof that amebic dysentery is a separate entity."

We recommend a therapeutic trial of emetine in all cases of dysentery, and urge full reports to clear up this point. If Lukis is right this is as valuable an agent diagnostically as it is therapeutically.

EMETINE BY THE MOUTH IN AMEBIC DYSENTERY

Elsewhere in this number of Clinical Medicine (see page 645), Roemer has given a report of a severe case of amebic dysentery cured by the use of emetine, given by the mouth instead of hypodermatically as advocated by Rogers. That the remedy is effective, even when given orally, Rogers now admits. In an article in *The British Medical Journal* (June 28, 1913, page 1357) Sir Charles P. Lukis says that Rogers "has also shown that one or two 1-3-grain tablets may be given by the mouth on an empty stomach without exciting great nausea, especially if they are keratin coated. This method of administration does not effect a cure as speedily as when the drug is given hypodermatically, but it may be useful when, for any reason, there are difficulties in connection with the giving of the injections."

In the same number of the *British Medical Journal* (page 1369), George C. Law, of the London School of Tropical Medicine, reports a case of relapsing amebic dysentery of ten months' standing, in which 1-2-grain doses of emetine hydrochloride were given in tablet form every evening. It caused no nausea, improvement was noted after the first dose, and by the second day the symptoms had entirely disappeared. Up to the time of writing, states Low, this satisfactory condition had continued. He suggests the use of keratin-coated tablets, as less likely to cause nausea, especially if the patient rests quietly in bed after taking the remedy. However, Roemer's tablets were not keratin-coated and seemed to cause no trouble.

Although Dr. Roemer was not aware of these reports when his paper was written,

he has good supportive evidence of the value of emetine, orally administered, in dysentery.

HYDROCHLORIC ACID IN PERNICIOUS ANEMIA

A. C. Croftan, of Chicago, warmly recommends the use of strong hydrochloric acid in the treatment of pernicious anemia, asserting that it is useless to administer the official dilute acid. It is true he has encountered considerable prejudice, especially on the part of druggists, against giving large doses of the full-strength preparation: however, no harm ever occurs, provided it is taken with meals including enough albuminous food to take care of the acid. From 10 to 15 drops of the full-strength acid is to be taken in plenty of mucilagenous water fifteen minutes after each feeding.

As a matter of course, the dose, greatly diluted, is to be taken through a glass tube, although Dr. Croftan does not mention this specifically; while the buccal cavity afterward should be well rinsed. Caution suggests the addition of a little sodium bicarbonate to the rinsing water, as suggested by A. G. Vogeler in these columns some time ago.

It is worth recalling that certain clinicians hold that the hydrochloric acid should be taken in 5-to-10-drop doses every twenty to thirty minutes during the entire period of meal digestion.

TREATMENT OF TABETIC PAINS

Eugene Dupuy, in a paper read before the French Academy of Medicine (*Gazette des Hôpitaux*, March 27, 1913) says that it is important to avoid as far as possible the use of morphine in the treatment of the pains of locomotor ataxia, and that, when it finally does become necessary to resort to it, the physician should give the hypodermic injections himself, never placing the syringe in the hands of the patient, who only too readily becomes a victim of the morphine-habit. He secured good results in the treatment of patients with exalgin, antipyrin, with cannabis indica in the form of a tincture, and with crystallized aconitine. These remedies, when properly administered, usually suffice, but the remedy *par excellence* for these pains is phosphorus. Sometimes one or two doses of this drug will arrest the painful attack.

In view of the observation of Dr. Dupuy, it appears to us that lecithin might be employed in the course of this disease with good results—not, however, as an anodyne. Who has tried it? and who will report? We shall also be glad to learn of the experience of those who have tried aconitine for the relief of the fugitive pains so characteristic of tabes dorsalis.

ANOTHER TREATMENT FOR TABETIC PAINS

In *The Eclectic Medical Journal* for April, 1913, Dr. T. D. Adlerman recommends the hypodermic injection of apocynum cannabinum in cases of locomotor ataxia. This remedy, he says, "gives prompt and lasting relief to the worst lancinating pains." Before administering the apocynum, it was his custom to direct the patient to take a prolonged warm bath at a temperature of 98° to 102° F., the bath lasting about twenty to twenty-five minutes. It has also been his observation that patients who are receiving the hypodermic treatment with apocynum were benefited by 10-drop doses of stillingia, In some cases, where the patient manifests a slight psychic disturbance, he alternates the stillingia with cerium oxalate, when the restlessness sibsides and sleep returns.

GONORRHEAL WARTS CURED BY BACTERIN TREATMENT

Armstrong (*The Lancet*, May 17, 1913) reports a very interesting case occurring in a man 26 years of age, a portion of whose face was covered with a crop of closely set warty growths. These appeared somewhat like the eruption of acne, but more like molluscum fibrosum. The disease was of eleven months' duration and had not yielded to local applications nor to surgical removal. A careful bacterial examination, made after the production of artificial hyperemia, showed that these peculiar warty growths were of gonorrheal origin.

Accordingly, the patient was given a gonococcus bacterin, beginning with the injection of one million dead bacteria. The result was immediate and remarkable. Within one hour of the injection, the lesion became itchy, irritable, and inflamed. The following day a sort of dry gangrene seemed to set in, many of the warts apparently having become mummified, and these could be rubbed off the face like so much sand.

Armstrong asserts that this effect, with so small a dose, was in itself diagnostic. Larger doses were given at the proper intervals, and five weeks after the commencement of treatment no trace of the disease could be observed.

THE POTATO AND ITS ALKALOID

In *The Universal Medical Record* for May, we find an interesting review of an editorial upon the potato, already published in *The Lancet* and reproduced in the June number of CLINICAL MEDICINE. After making some remarks anent "the judicious diet of potatoes," so pleasingly advocated by the editor of *The Lancet*, as a possible sedative for neuralgia, neuritis, headache, and other troubles, the editor of *The Record* calls attention to the fact that solanum carolinense has had a place in the materia medica of American eclectic practitioners for twenty years or more, and brief reference is made to its possible value in the treatment of "chorea, infantile convulsions, puerperal eclampsia, and epilepsy."

Continuing, the editor then points out that the isolation of this active principle has carried its use a step farther, since not a few American doctors now commend the administration of solanine in epilepsy. The papers by Atkinson, in THE AMERICAN JOURNAL OF CLINICAL MEDICINE, are quoted as evidence that this alkaloid is a perfect cerebral sedative and admirably adapted to long-continued administration, as for instance in epilepsy. The editor of *The Record* suggests that the English practitioner might well investigate the therapeutic efficacy of solanine—an undertaking by the way, that we most urgently advise our brethren on this (as well as on the other side) of the "pond" to follow.

TYPHOID BACTERIN DURING THE INCUBATION PERIOD OF TYPHOID FEVER

Vincent, in a paper presented to the French Academy of Sciences, March 10, 1913 (*Gazette des Hôpitaux*, March 20, 1913), says that, the duration of the incubation of typhoid fever being two or three weeks and that of vaccination 21 days, he arrived at the following conclusions regarding this procedure performed during an epidemic period: (1) the inoculation may be made upon persons already infected and during the incubation stage of the disease; (2) typhoid infection may occur even during the course of the vaccination itself, before immunity has been produced.

In considering these cases, Vincent arrives at the conclusion that generally the first injection of a polyvalent typhoid bacterin produces an immunity sufficient to protect those who are already at the beginning of the incubation period of typhoid fever and those also who would be infected during the three weeks of the incubation period of the inoculation. He says that, since there is no negative phase, there is no danger in vaccinating patients during an epidemic, while, on the other hand, the injection exerts a favorable influence, as shown by the rarity of typhoid attacks among subjects in the incubation stage, and by the benign character of the cases of typhoid fever already in evolution when the injections are made.

AN EPIDEMIC OF TYPHOID FEVER

C. J. Hunt presents (*Journal of Infectious Diseases*, May, 1913) a study of an epidemic of typhoid fever occurring in the borough of Troy, Pennsylvania, in which 229 cases of typhoid fever occurred, 225 of which were primary and four secondary. In other health jurisdictions, 32 other cases were reported.

A very large percentage of these cases occurred between the tenth and thirtieth year of age, indicating, according to Mr. Hunt, that the source of disease transmission was water. As he states, it is an interesting fact that in all water-borne epidemics in Pennsylvania from 60 to 80 percent of the patients have been between 10 or 15 and 30 years of age, while in milk and ice-cream-borne epidemics the predominant age is well below 15 years.

In this epidemic, 17 percent of the persons living in the affected locality were attacked by the disease. In no other epidemic has there occurred so high a relative morbidity. After an examination of the various possible sources of infection, including milk, ice-cream, ice, and the water supply, the evidence seems conclusive that the last-named source was responsible for at least the majority of the cases of typhoid fever.

The water used in the Troy borough was designed to be obtained from a set of springs piped to a common point known as the upper collecting reservoir, at which point was also collected the ground-water from various points in a natural gravel formation. At this source there were six shallow springs and two flowing wells, 100 and 194 feet deep, respectively.

In addition, there were two creek intakes, intended to intercept the ground-waters and deliver them to the upper collecting reservoir; but, intentionally or otherwise, direct communication was made with the creek itself, as was shown by the uranine test.

There was evidence to show the contamination of the water supply by a family, in which there were 4 cases of typhoid fever, not far from the source of supply. While this family lived below the reservoir site, a member of it worked in the harvest-fields tributary to the water-shed draining into the municipal reservoir. An examination of the water showed large quantities of bacilli coli.

Having determined upon the source of infection, Mr. H. E. Moses, engineer of the state department of health was called in. The water in the two reservoirs supplying the borough was first treated with copper sulphate, later, a temporary plant being installed, to treat the water with hypochlorite of calcium. The street-mains were flushed, all dead ends and taps being opened, until the water showed the presence of the hypochlorite at all points. This measure, with the others employed, seemed to be effective.

In addition, 761 persons, or 56.6 percent of the total population exposed to infection, were treated with prophylactic antityphoid vaccination. Among those vaccinated, 37, or 4.6 percent, developed typhoid fever, while among 582 not vaccinated, 65, or 11.16 percent, developed the disease.

Mr. Hunt says that the chemical treatment of the water has been continued since that time, without the occurrence of any new cases.

STREPTOCOCCI AS AN ETIOLOGIC FACTOR IN CHRONIC ARTHRITIS

D. W. C. Jones contributes a paper to *The British Medical Journal*, May 17, 1913, which deals with the bacteriologic diagnosis of arthritis, based upon the results following the therapeutic use of a streptococcic bacterin. He has treated twenty consecutive arthritic patients in private practice, in all of which cases a tentative clinical diagnosis of streptococcic infection was made, and a streptococcus bacterin made from the organisms derived from different sources was administered.

Jones reports these cases in detail, and his conclusion is, that, if therapeutic results can be accepted as a basis of bacteriologic diagnosis, then eight out of these twenty cases give strong evidence that the arthritis was due to infection by streptococci, chiefly derived from some part of the alimentary canal. In all of these eight cases there was more or less improvement. In but few, however, was this improvement very marked, although in case 9 the bacterin treatment produced very striking results and apparently complete cure at the end of three months.

SOME USES FOR LOBELINE

Pigeaud, in *La Dosimétrie*, says that the alkaloid lobeline exerts its action principally upon the respiratory center. Before he became acquainted with this drug, he used the tincture of lobelia with good results, but since having adopted the alkaloid he finds that he gets better results. He uses this drug in granule form exclusively. He asserts that lobeline is more effective in spasmodic conditions than morphine, providing the doses are repeated sufficiently often.

Sigmund has employed lobeline with success in the treatment of spasmodic cough, giving the drug, during the violent attacks, every quarter of an hour. While it is evident that morphine will quiet a patient more rapidly than lobeline, the very fact that the former may not be repeated, except after a considerable interval, makes it to that extent less efficacious than the granules of lobeline, which may be given at short intervals.

In this connection Pigeaud reports a very interesting case of asthma. The patient had suffered from daily attacks for a number of years. The treatment previously given, including hypodermics of morphine, had proved imperfectly palliative only. The morphine alone would control the attacks, but they returned just as violently as ever after the narcotic's action had disappeared. When Dr. Pigeaud saw the patient at his first visit, about 10 o'clock in the evening, he presented the symptoms of suffocation and the characteristic distress in a very marked degree. The attack had begun more than an hour before the doctor arrived.

He began immediately to administer lobeline in 0.5-mgm. doses every quarter of an hour. At the fifth dose the paroxysm ceased. The remedy was continued during the next day in this fashion: One mgm. every two hours. The following day the attack came on at the usual hour, but much less violently than before, and was almost completely brought under control by 2-mgm. doses given every quarter of an hour. The lobeline was continued for another day, and the succeeding night the attack failed to appear. The

patient was so captivated with the efficaciousness of this treatment that he asked to be given some of the granules, so he need not wait the physician's attendance should renewed attacks threaten.

For catarrhal and cardiac asthma, emphysema, and other conditions, in which an antispasmodic is indicated, Pigeaud recommends the associated use of hyoscyamine, lobeline and strychnine arsenate. These are given in small doses, ordinarily every fifteen minutes in acute attacks, and at longer intervals in chronic forms. Thus administered, this combination gives excellent results, and particularly, he says, in the treatment of whooping-cough and asthmatic paroxysms.

TREATMENT OF INFANTILE DIARRHEA

Just now, the summer diarrheas of childhood are of special interest. Radue, in his "Diseases of Children," gives the following simple directions for the treatment of the usual forms of diarrhea occurring in children. Even cholera infantum, he says, may be managed along the same general lines as described below:

"First of all stop all food. Give 1-6 of a grain [or 1-10 grain, with aromatics.—Ed.] of calomel every hour for six to eight doses; or, if you desire, administer a good dose of castor oil to clear out the intestinal tract. Give small quantities of cool water frequently in which the white of an egg is beaten. For fever, if present, give aconitine. For a child of two years give 1-2 grain of zinc sulphocarbolate every hour in solution, or you may dissolve two zinc and codeine compound tablets in 24 teaspoonfuls of water, and give a teaspoonful every hour until relieved, then give it less often as the case requires. If there is collapse, put two granules of 1-250 grain, a grain of atropine into 24 teaspoonfuls of water, and give a teaspoonful every hour until reaction occurs, then reduce. Add strychnine in small doses for tonic effect, In some cases copper arsenite, 1-1000 of a grain in solution every 15 minutes until effect, acts most wonderfully.

"Above all keep the bowels clear with saline laxative or calomel, and push the sulphocarbolates with strychnine. Give codeine for pain, and success will be assured. Of course, if complications occur, as they surely will in some cases, you must treat accordingly; and you will have to resort to astringent enemas and colonic flushings with a solution of zinc sulphocarbolate, or silver nitrate, one grain to the ounce of warm or cold water, whichever you may desire. For dysentery, give small repeated doses of saline laxative, and you may give small repeated doses of acetate of lead, tannic or gallic acid, hydrastinine, and ergot. Castor oil is also of good service."

KEEPING COOL ON HOT NIGHTS

How to procure restful and refreshing sleep on oppressively hot summer nights is a problem concerning everybody, not alone the ailing and the seriously sick, but all of us who would maintain good health; and the family doctor is the one to advise the people—entirely aside from the personal aspect of himself keeping in working trim. Hence the following suggestions, contributed by Dr. A. L. Aston to *The Chicago American* seems worthy of wider currency, and some of our readers may wish to give the method a trial and report upon it. Needless to say that the mode of constructing the canopy is a matter of detail, to be varied according to circumstances. Dr. Aston's letter follows:

"The pitiful condition of the people in the torrid heat-waves has impelled me to write you my experience in getting a good night's rest no matter how hot the weather, and also a panacea for feverish patients, especially those afflicted with typhoid fever. This is my method as I have employed it in my practice of medicine as well as for my own benefit:

"I pass a wire or rope tightly around the top of the head-piece of the bed and another about the top of the foot-end. Then I fasten similar strings to the loops thus formed, one on each side of the bed, and draw them tight, so that they run lengthwise overhead from head to foot, while still other strands are run diagonally between the two lateral guys. This forms a support as for a fly-canopy.

"Now take a large sheet and wet it thoroughly, but not soaking-wet, and hang it over the wire frame, enclosing the bed. Have all the windows and doors open for plenty of draft. Everything ready, no matter how hot and stifling it may be, a person can crawl into this tent-bed and sleep soundly generally until nearly morning. If now the sheet is dampened again, it will last until daylight, when the sleeper will awaken refreshed and strong to meet the heat and business of the day.

"In case of fever, it is better than the fatigue of putting the patient into a bathtub, the quieting effects are strengthening, and it will allay fever more quickly than any other method ever tried."

MISCELLANEOUS ARTICLES

Closing Exercises of the Army Medical School, Washington, D. C.

THE closing exercises of the United States Army Medical School at Washington, session of 1912 to 1913, took place on May 31. Through the courtesy of Dr. Richard Slee, of Swiftwater, Pennsylvania, a member of the editorial staff of CLINICAL MEDICINE, who was present, we are enabled to give the following report of the addresses delivered on that occasion.

Opening Remarks by Colonel Charles Richard, Commandant

This day's exercises closes the 17th session of the Army Medical School, which was established in 1893 by Brigadier-General George M. Sternberg, at that time Surgeon-General of the army. General Sternberg, who honors us with his presence here this morning, fully appreciated the necessity of establishing a course of training and instruction for young physicians entering the army. The wisdom of his policy has been fully demonstrated by the results obtained, which have been of benefit not only to the medical corps, but to the army at large and to the medical profession of the country.

It has been the custom, ever since the establishment of this School, to request some distinguished member of the medical profession to deliver an address to the graduating class at these exercises. The selection this year has been a particularly happy one, in that Dr. Charles W. Richardson, who is a resident of Washington, and a member of the Medical Reserve Corps of the army, has been selected for this duty. I take pleasure in introducing Dr. Charles W. Richardson.

Dr. Richardson's Address

When I was requested by the Surgeon-General of the army to address you this day upon your graduation from the Army Medical School, I felt somewhat disturbed over the obligation I was to assume, although appreciating greatly the honor his request brought to me. Appreciating the fact that it behooves the soldier to accept with alacrity and pleasure the request of his superior officer, I accepted the call at once—however unqualified I seemed—and, in the same line of duty you, as good soldiers, must listen to me throughout my address, however much you may wish to flee from action.

You gentlemen, after your graduation from the best of American schools, have, through your individual efforts, shown your efficiency to so great a degree, as to be accepted, through examination, for the medical service of the U. S. Army. In former days, before the establishment of the Army Medical School, it was customary, after the aspirants had demonstrated their general knowledge and medical skill to the satisfaction of the examining board, to accept them into the service without any previous military training and hie them hence to some near or distant military post, to learn, as well as they might, the difference between military and civil practice, as well as those obligations which they had assumed with regard to the sanitation and hygiene of large bodies of men in barracks or in the field.

Through the establishment of this magnificent school, with its admirable corps of teachers, with its laboratories and practical apparatus for teaching military medicine, a practical postgraduate course for specializing in military surgery, you, gentlemen, upon your graduation today, go forth fully equipped to assume any obligation you may be called upon to meet. Coming, as you do, from various cities in more or less distant parts of our great country, you have been brought to this, your capital city, to undergo your preliminary service in the army.

How well-ordained your first year of service has been! Could one imagine a better preliminary habitat, a more delightful environment for one to make his initial preparation for his actual calling in life? Although you have been especially occupied in your duties in connection with your postgraduate

work, the fact has not, probably, escaped your attention that here, in your capital city, there is a vast storehouse of scientific material, data, and facts which is constantly attracting the scientific worker along avenues of thought and action. All the departments of the federal government have, as necessary adjuncts to the performance of their designated functions, various bureaus and laboratories of research, all of which have attracted men of genius and scientific attainment.

Those various bureaus and laboratories, all under the charge of experts, furnish inviting fields for those of scientific inclination who wish to follow out research along any particular line in science which may interest them individually. Helping hands and directing minds are ever ready and willing to aid. In your chosen profession, for example, we have the army medical library and museum and the various laboratories associated with them, also the admirable clinical facilities offered by the Walter Reed Hospital. Therefore, viewing our capital city from its educational aspect, it might be termed a great postgraduate university without administration or a prescribed curriculum.

Education, the acquisition of knowledge, has been the quest of man since the dawn of light. There is no question that the best method by which to obtain an education has been a source of controversy as far back as the light of history leads. It seemed for many years, especially in this land, that the course of education along prescribed lines had a certain foundation, which was regularly planned, and closely followed from the primary school, through the graded school, into the high school, and from thence to the departments of arts and sciences of the university.

During the past quarter of a century, many fads and fancies have crept into the educational system, which have resulted in lessening the time necessary for the proper elucidation of elemental work along the fundamentals of primary education. From a physiological standpoint, we find that the tendency of the age is to develop precocity in children by reducing the age of beginning attendancy. Facilities are offered, throughout the various advanced educational systems, to the schooling and confining of children at too early a period in their development. It is a well-known physiological fact that the child's brain is undergoing its most rapid development during the first seven years of its life. The cerebral convolutions are deepening and the grey cells are increasing in number, and maturing.

All efforts to stimulate unduly cell activity during this period of child-life should be avoided as far as possible. The tendency therefore, to place children in primary schools at too tender an age, because being detrimental to their physical and mental welfare, should be avoided as far as possible by boards of education. The results of the violation of this well-known physiological fact is too often patent to the practitioner of medicine and frequently to the sorrow of well-meaning but misguided parents. The physical and mental development of children, other things being equal, is best conserved when they are not placed in the line of serious educational work until after they have passed the sixth year of life.

While probably it is true that we are all born equal, it is nevertheless more of a fact that this equality ceases with the first act of cerebration. Throughout the course of life the mental activity, the capability of acquiring knowledge, and the limitations of this power, differ greatly in children -therefore the necessity, if it were possible in our complex system of education, to separate the children in their educational progress into smaller groups and to meet the requirements as to advancement according to the averages of the various groups.

In the collegiate departments of many of the universities, there has been an effort during this period to meet the requiremrnts of the individual or groups of students by the adoption of the socalled elective system of study. In some of the universities, the tendency to the elective system has extended so far as to make it as undesirable here, in its extreme liberality, as would be a more discriminating course desirable in the public school system. Indeed, the movement of radical tendencies shown by some of our universities along this line has been too rapid, some of them permitting the immature student practically to elect the greater portion of his curriculum. The universities have seemed to vie with one another in making as short a course as possible; to the goal which the student wished to attain; the major requirements have been reduced to the minimum, so as to permit the student to have the greatest possible lattiude in the course he wishes to pursue.

The effect of such extreme latitude cannot but result in numerous errors on the part of the student, and, if pursued, needs must be productive of a narrow and superficially pre-

pared graduate. The conservative action in recent years pursued by the strongest of our older educational institutions will, no no doubt, readjust the system along more practical and satisfactory lines.

A few years ago, I heard an address by one of our distinguished university presidents, in which he questioned seriously whether the elective system in university education had not progressed too far, and whether it did not require a thorough readjustment.

In some of the scientific departments of the universities, there also has been some tendency to permit of the elective work during the regular course, for the purpose of permitting of specialization along some particular line. In a few of the medical schools, there deeloped a tenvdency to shape the course of the undergraduate in medicine, if he wished, in such a way that he would be prepared during his undergraduate course for some particular line of special work. From the fact that all specialties in this discipline demand a thorough knowledge of general medicine, and further, because many local pathologic changes are dependent upon disturbed innervation of the general system, there is no possibility of the elective system thriving in the undergraduate medical course.

In medicine, there is no short course to attain desired ends. The progress through the medical school must have but one fixed purpose in the preparation of the undergraduate, and that is the creation of a well-rounded medical graduate. The product must be be as broad and as well trained as the course and facilities of the institute will permit.

Thanks to the standardization of methods of medical education and the requirements of the state boards of medical examiners, there is now practically no possibility for any system of elective study creeping into the domain of medicine. The tendency of specialization is to narrow one's view of medicine, and it is only through persistent effort that the worker in a special field of medicine can maintain his perspective of general medicine—even though he has spent some years in general medical practice before devoting himself to his specialty. How narrow, necessarily beyond the power to overcome, would be one who begins his work along a special line while still in his undergraduate course!

The wonderful progress in the science of medicine during the past quarter of a century not only has caused a complete revolution in the practice of medicine, but has also been the cause of a similar revolution in teaching it.

The independent medical school has almost ceased to exist. Many of the weaker schools have dropped out of existence. Others, through combining—and thus increasing their teaching staffs, financial resources and clinical facilities—are better prepared to meet the present advanced rquirements of medical education. One of the oldest universities in the land—Dartmouth—has just announced its intention to close its medical department to graduates, on account of its inability to meet the modern demands of medical education, its clinical facilities being inadequate.

It seems as though the medical schools of this country, in the new requirements of matriculates, in the creation of a greater number of full-time chairs, and in the increasing of the clinical over the didactic teaching, were anticipating the demands of the pessimistic report of a distinguished educator on the subject of a medical education in the United States.

This advancement and progress in medical education has not been the result of a demand from without the profession, but has risen as a result of the evolution of the science of medicine, and from the desire of the profession, from its broad altruistic and humanitarian principles, to send out each succeeding year a better-equipped corps of medical graduates, men better prepared to meet the ever-increasing demands and requirements of the public.

With the progress of the science of medicine, the tendency to specialize along various lines and fields of medical endeavor made itself manifest. For many years the practitioner, from natural inclination or from attractiveness of study, drifted into certain special lines of practice or study, often perfecting himself by years spent with some master in his chosen field.

At a later period, we have the development of the postgraduate medical school, more or less perfectly conducted, with or without proper clinical facilities, and which may or may not fully prepare the practitioner for his special field. Such schools are not under university control, and do not possess the power of conferring a degree. This method of teaching the specialties has not been fruitful of general good results.

The profession has been in a state of unrest for many years because of the inadequate methods of educating qualified practitioners along the lines of special practice. This unrest, again, is working in the profession for the humanitarian purpose of protecting the public from imperfectly prepared

men. During the past few years several of the special national medical societies have had this important theme under consideration, and papers bearing upon this subject have been read and discussed.

Last year, in one of these societies, a commission, of which I had the honor to be a member, was appointed to investigate the subject exhaustively, obtain reports from all the teachers along their particular lines in the medical schools of Canada and the United United States relative to this subject, and report their action before the meeting of the society in Washington during the first week in May, 1913.

The essential features of that report were, that there existed the necessity of ascertaining the qualification of the matriculate for the special line of study which he desired to pursue; the necessity for lengthening the time required in the various courses in the postgraduates schools; that postgraduate teaching should be under university control; and that after an adequate examination, if full qualification be shown, the student should be granted a diploma.

The same spirit along another line was crystallized at the same time in the actual formation of the College of Surgeons of the United States, which has for its object the standardization in this country of the art of surgery, and is founded upon the same standards and ideals in surgery as the Royal College of Surgeons of Great Britain.

The profession, as it has raised its standards of medical education in the undergraduate department, will, within the near future, shape out most thoroughly the methods pertaining to the conduct of postgraduate study and the administrative plan through which the various courses are to be pursued in the postgraduate schools. Such a postgraduate school as you found prepared for you here, of which you had the advantage, and from which you now go forth with knowledge of military surgery, in a similar type is the great desire of many teachers of medicine to see established for the teaching of special subjects to civilian practitioners.

Employed, as you have been, during the past few years in your acquisition of a knowledge of medicine, you have not, probably, taken much interest in the history of medicine and of how, down through the centuries, the art of medicine passed without getting beyond highly trained observation and the conception of disease as a process of nature. Our early teachers, Hippocrates and Galen, had no higher conception of medicine, although Galen did perceive that experimentation and the collection of data, from which principles and laws could be derived, were essential for a scientific basis for medicine.

For many centuries during the period of medievalism, the teachings of the past seemed to have been lost; only the flickering lights in monasteries here and there kept the flame alive until the birth of the period of the Renaissance.

With the revival of learning, the questioning of the observations that had been handed down through the ages became more general, and enquiring minds became bold enough to investigate. The inquirers began to investigate, and then to experiment, and thus we have the birth of modern science.

It would be far beyond the limits of this address to trace the progress of medicine through the centuries from the revival of learning to the present vast strides in medical progress, but it is my desire to direct your attention to one medical name that stands out during this generation—to pay a tribute to one who by his life-endeavor brought hope, joy, and life to countless thousands of homes. His genius should act as a guiding star to your efforts.

In Morton, we have the genius who risked reputation and even life in a series of experiments that proved to the world that the knife could be robbed of its pain and the terror of the operating-room be banished. In Lister, we have the genius that, accepting the teaching of Louis Pasteur, gave us antiseptic surgery. In Major Reed, we have the brilliant and courageous mind that made the building of the Panama Canal a physical possibility; and in that quiet, unassuming practitioner, Joseph O'Dwyer, we have that intrepid, diligent and exact mind that gave to the world the most wonderfully perfected mechanical device for the relief of dreadest agony and the saving of child-life that the world has yet known.

In 1885, there was given to the world a new mechanical device for combating one of the most distressing and life-destroying complications of a most fatal malady. I refer to the method of intubation for the relief of laryngeal diphtheria. Previous to the introduction of intubation, the only relief that could be afforded to the little sufferers from impending suffocation in croup was through the performance of the operation known as tracheotomy.

The mortality from tracheotomy, as done upon the children in the New York Foundling Assylum, caused one of the attending

physicians at the institution to long for a simpler, safer and more certain method of relief. Dr. Joseph O'Dwyer thought long and seriously over the project, and, after a period of painstaking thought, hard work and tedious experimentations, he at last perfected a set of tubes, one of which could be placed, through the mouth, into the larynx and trachea, and there permitted to abide for a period of time until the disease had been arrested, when the tube could be removed without fear of a recurrence of the obstruction to the breathing. These tubes were so perfectly formed, so admirably adjusted, and so exquisitely fashioned to the purpose for which they were intended, that when so perfected and placed before the profession they were a finished article.

The last word, so far as those instruments were concerned, was said when they passed from the inventor's hands into the possession of the profession. Joseph O'Dwyer, like many of the great laborers in human endeavor, was a thoughtful, earnest worker, not given to express himself to great length in words, and only after years spent in diligent work and research developed the latent genius that he possessed.

For five years O'Dwyer dreamed, thought, and spent many of his hours in perfecting the tubes, measuring infants' larynxes, as to average sizes and shapes, and in so shaping the tubes that they would present a collar here that would prevent them from slipping into the trachea, and a swelling there to prevent them from being coughed out. The tubes were so made as not to produce undue pressure at any point when properly adjusted and, yet, so fashioned as not to be automatically expelled. Experiments made after the tubes had been fashioned, to a certain degree surreptitiously, to discover whether the tubes would be tolerated by the human larynx and would there abide without causing injury, must have been a period of fear and anxiety to this noble-hearted seeker after knowledge.

How keenly he followed the path of a discriminating scientific laborer, was demonstrated through all his efforts in the perfecting of his tubes; but still greater was this evidenced in his preparation for its final announcement to the profession. Although having a perfect instrument with which he had demonstrated its successful working in the public wards of the Foundling Asylum, and although the profession was clamoring for its proclamation, O'Dwyer was not willing to do so until its merits had been demonstrated under the trying ordeal of private professional work. After several successful issues on cases intubated in private practice, he then placed his invention in the hands of his professional brethren, without other reward than the plaudits of his colleagues and the knowledge of a noble, humanitarian work well done. So keen was he in his desire to spread the knowledge of his work, that he gave his time, so that others might be instructed without remuneration.

As evidencing this desire on his part, was his friendly reply to my letter requesting when and how I could best obtain the experience requisite to make use safely of his tubes. At his invitation, I immediately went over to New York, and was by him escorted to the room in the cellar of the Foundling Asylum, where he had conducted most of his experimental work, and there, with material furnished by him and through his own personal instruction, I was prepared for the work. Having expressed his satisfaction at the skill his pupil exhibited, we were about to part, when I asked him how I was to recompense him for his time. His answer was, "It has been a pleasure to instruct you. If you wish, you may send a small token in the form of a book to the interne who has gotten together the material for us."

Devotion to his art, infinite courtesy and kindness, self-abnegation and almost painful modesty were characteristics of Joseph O'Dwyer. It is noteworthy that the tubes so perfected by Joseph O'Dwyer have never been improved. Throughout the world this method of saving children threatened with suffocation rapidly spread, and was immediately adopted. In the New York Medical Society, at the Washington session of the International Congress of Medicine, and elsewhere, O'Dwyer received the thanks, congratulations, and the ovation of the profession. Countless thousands of children owe their lives and relief from suffering to this great master.

Joseph O'Dwyer, at the time when he perfected the method of intubation, was a very successful practitioner, but the demands of his creation caused him to relinquish his general practice. Soon, however, the increase in the number of skilled intubators and then the advent of antitoxin caused a rapid loss of revenue from his special practice. Prematurely old, lacking in financial means almost akin to want, we witness this great man pass to his maker at the early age of fifty-seven years—leaving so little of worldly possessions that loving and admiring friends in the profession provided for the education of his four motherless sons.

Such in brief is the history of one of the greatest mechanical additions to modern medicine, one of the most perfectly and immediately successful instruments ever invented by human agency for the relief of human suffering. Such is the history of that patient, kindly, God-fearing, diffident man, Joseph O'Dwyer, who gave of his all, that, through his effort, human life might be redeemed.

The careers of Morton, Long, Helmholtz, Pasteur, Lister, Sims, McDowell, Beaumont, Behring, Ross, Reed, Carroll, O'Dwyer, and of countless other modern workers along the pathway of scientific medicine demonstrate that the great truths of medicine, the great sanitary discoveries, the great biologic and laboratory findings, and the remarkable achievements in invention of instruments of precision in diagnosis, surgery, and therapeutics are usually worked out, achieved, discovered, and invented by men of scientific attainment after most thorough preliminary training, through diligent effort and research; and when at last the results are proved to the satisfaction of their immediate colleagues and themselves, the fact is announced to and for the benefit of their colleagues throughout the world and by them dedicated for the welfare and to the good of humanity.

Standing now, as you do, at the threshold of your active professional career, you must be optimistic as to the future of medicine and the possibilities it offers you for signal achievements in laboratory research, improvements in sanitation, progress in preventive medicine and possibilities in the discovery and invention of mechanical devices as aids to diagnostic and therapeutic results. Great as has been the progress of scientific medicine during the past thirty years, greater will be that progress amid the days that now open before you, and our hopes and wishes are, that through your efforts and endeavors you may be large participants in this activity and material, if not signal, aids in the future progress and glory of medicine.

Introduction of the Assistant Secretary of War

In introducing the Assistant Secretary of War, Colonel Richard said:

The Secretary of War expected to be with us this morning, to present the diplomas to the successful members of the class, but he found it impossible to do so. He is ably represented, however, by the Assistant Secretary of War. I need hardly tell you how much we appreciate the interest he has shown in the school by coming here today. I take pleasure in presenting him, the Honorable Henry S. Breckenbridge.

The Assistant Secretary of War spoke as follows:

"Before proceeding with the presentation of these diplomas, I merely wish to make two remarks, and the first is to express to you gentlemen, the regret of the Secretary of War for his inability to be here; and the second is to express my own profound appreciation of the privilege to be here and present these diplomas to the men who here consecrate themselves to follow in the trail so gloriously blazed by Walter Reed and his coworkers."

With a hearty handshake, and with congratulation which, it was evident to see, were genuine, the Assistant Secretary then handed each graduate officer his most highly prized diploma.

Colonel Richard Introduces General Sternberg

Early in the present session of the school, Dr. Richard Slee, of Swiftwater, Pennsylvania, a member of the Medical Reserve Corps of the Army, generously provided for the annual awarding of a gold medal in honor of Brigadier-General George M. Sternberg, the founder of this school, who had been Dr. Slee's instructor in bacteriology. This medal is to be given to the graduate officer with the best term-record in practical knowledge of the subjects of bacteriology and serum-therapy. It is to be known as the Sternberg Medal. It is especially fitting that General Sternberg should present the first of the Sternberg medals to the successful graduate. I have the honor to present General Sternberg.

General Sternberg's Address

Lieut. George B. Callender: It gives me great pleasure to present to you the first Sternberg medal, which is awarded to you by the faculty of the Army Medical School for your proficiency in bacteriology and serum-therapy. I highly appreciate the privilege of presenting this medal, which has been provided and named by Dr. Richard Slee, who studied bacteriology under my direction in the Hoagland Laboratory, Brooklyn, N. Y., more than twenty-five years ago.

My own bacteriological studies commenced at a time when, so far as I know, no one in this conutry had made any serious researches in this field of investigation, and the majority of the profession regarded this class of micro-organisms as of no importance from a pathological point of view. It is unnecessary to point out to you the successive steps in the

development of our knowledge since that time, and the great value, especially to preventive medicine, of the facts which have been brought to light by a host of earnest students in the bacteriological laboratories in all parts of the civilized world.

It is a matter of gratification to me to know that here, in the Army Medical School, this branch of medical science is given special attention, and that in future those who come here to prepare themselves for the varied and responsible duties of medical officers of the army will have a special incentive to excel in bacteriology.

At the same time, I desire to impress upon you the fact that no expert knowledge in any one branch of medical science will justify a neglect of that practical knowledge of medicine and surgery, and that preparation for active field-service which it is essential that every medical officer should possess.

GEN. GEORGE M. STERNBERG

You cannot give too much attention to questions relating to the prevention of disease among those whose sanitary interests are committed to your care. But, while the studies you have pursued at the Army Medical School are designed especially to prepare you for these responsible duties, you must not forget that the interests of the sick and the wounded of our army are in your hands, and that these interests and your reputations will depend upon your professional knowledge and skill.

It is a matter of great satisfaction to me that the Army Medical School, which I established twenty years ago, has served so useful a purpose and is at present in such a satisfactory condition. Several of its earlier graduates now belong to the faculty of the school.

We can point with pride to the achievements of many of those who have received its diplomas, and we confidently anticipate that you, Dr. Callender, and other members of your class will do some notable things in the interest of scientific medicine, and for the reputation of the Medical Corps of the army.

In closing my brief remarks, I desire to express to Dr. Richard Slee my high appreciation of the honor he has done me by giving this medal my name. It is now fifty-two years since I received my commission as a medical officer of the army, and when I consider the great progress which has been made in medical science and in the facilities for acquiring a sound medical education since that date, I feel that you are entering upon your career of active service with greatly superior advantages, and that we may justly look to you for superior achievements. I congratulate you upon being the first graduate of the Army Medical School to receive the Sternberg medal, which I now present to you.

Colonel Richard Introduces Colonel Hoff

"In 1897, Colonel John Van Rensselear Hoff, of the Medical Corps of the Army, generously provided for the annual awarding of a gold medal as a memorial to his father, who had been a distinguished officer of the Medical Department of the army, to the graduate who had maintained the best average standing in his class. Fortunately, Colonel Hoff is able to be present on this occasion to present the medal in person.

I take pleasure in presenting Colonel Hoff."

Colonel Hoff's Remarks

Lieutenant Warriner: In presenting to you this medal, a memorial to my father, which you have won by your scholarship, I congratulate you; firstly, upon the preeminent standing you attained in your class—no small acomplishment; and secondly, that you are about to become a member of a Corps of distinguished lineage and brilliant prospects. Upon you and your fellows will depend, largely, how far such prospects shall become realizations.

Colonel Hoff then presented the medal, and after hesitating a moment said:

"May I give you a word of advice? Look well to the signs of the times and heed them. Everywhere there are wars and rumors of wars, and we cannot hope to escape conflict, sooner or later; nor, under certain circumstances, should we wish to.

"Our country is ill-prepared for war, and it is one of your highest duties, within your sphere, to see that your department shall not fail because of lack of preparation when the day of trial comes, as it will surely will."

THE PRIZE CONTEST

In June, as you will doubtless remember, we had a brief editorial in which we offered some prizes for the best short articles upon summer-time ailments. We have received a number of little articles, and some of these follow directly after this brief announcement. Other and longer articles upon the same general theme will be found elsewhere in this issue.

Now—who shall have the prizes? We might award these ourselves, but possibly we might show some bias. We do not want to do that, and therefore we come to the "family" for advice. Will not every reader signify (post-card will answer) what articles he thinks of most practical help? Please attend to this at once and please us greatly.

We want to keep up these symposia. *We* think them mighty interesting. In the September number let us discuss *asthma*. Prizes will be awarded for the most helpful short articles—200 to 500 words by preference. We want to hear from as many as possible.

ERYSIPELAS—A THERAPEUTIC NOTE

As I have received so much help from some of the experiences of those writing for your journal, I want to suggest to the brothers that in their next cases of erysipelas they try the following applications.

Thoroughly wet the affected area with pure apple-vinegar, then immediately sprinkle over with sifted prepared chalk. You will get wonderful results from two or three applications. Of course, aconitine for the fever and calcium sulphide to saturation is understood. Try this, but be sure to use nothing but pure apple-vinegar, and you will be surprised at its quick action. Success to our journal.

J. A. Nelms.

Stockbridge, Ga.

[Don't forget the value of pilocarpine in sthenic erysipelas; it often works like a charm. However, the doctor's suggestions are excellent, although in *my* next case I am going to paint the affected area with tincture of iodine and, after drying, apply flexible collodion to exclude the air. Often results which are simply marvelous follow the use of streptococcus bacterin in some cases of erysipelas. This is an emergency remedy useful in many severe acute blood infections, and every doctor should have it on hand.—Ed.]

SUGGESTIONS FOR SUMMER AILMENTS

In the June number of Clinical Medicine I saw your request for "hints" for summer-time (and other) ailments. Here are a few:

Treatment of Snake Bite.—Ligate the bitten limb in two or three places (above the lesion), incise the bite at right angles (half an inch deep perhaps) and, with both hands tightly squeezing the limb, rub downward from the lowest ligature toward the wound six or eight times, keeping the wound under tepid water. Now untie the lowest of the ligatures, rub again downward and rub the bite so as to keep it bleeding. Alternate the downward friction and taking off the ligature, until all three are removed. Then, if possible, put on a cupping-glass (one can be improvised) letting it refill repeatedly half a dozen times. Then soak the wound in coal-oil for an hour. The wound heals as if it were a mere scratch.

Another Way of Treating Snake Bite.—Inject hypodermically in four places opposite each other and close around the bite, about 6 drops of a 10 percent solution of potassium permanganate, then apply a wad of absorbent cotton saturated with fluid extract of echinacea and allow to remain for six or eight hours. At the same time give a teaspoonful of the echinacea in half a glass of water every three hours.

Pleurisy.—Compound tincture iodine, locally, and iron iodide in pill or granule form, internally, is without a rival. Syrup of iron iodide is good too. [The treatment suggested seems best adopted to the chronic type, or to convalescence from the acute form.—Ed.]

Catarrh of the bile duct is often cured by hydrastis in small or medium doses. [But don't forget sodium succinate, especially when there is a tendency to chronicity. For the acute stages, with jaundice or "biliousness," try iris, podophyllin, the bile salts,

the salicylates, and laxative saline "drainage." Fit remedy to the case.—Ed.]

For Cholera Morbus.—Cocaine hydrochloride, grains 2; phenol, grains 2; elixir of lactopeptin, ounce 1. A teaspoonful after each time of vomiting. Eschew water. Vomiting ceases at once. For the pain, a hypodermic injection of hyoscine, morphine and cactoid or ¼ grain of morphine with 1/150 grain of atropine; to be repeated as needed. After six or eight hours' rest give this: Calomel, grs. 4; bismuth subgallate, grs. 3; saccharated pepsin, grs. 3. Make into 8 capsules. One every two or three hours; followed, if necessary, by castor oil. [When the stomach will tolerate them give the sulphocarbolates by the mouth; wash out lower bowel with aqueous solution of zinc sulphocarbolate.—Ed.]

For Urticaria.—Atropine sulphate, 1/150 grain granules, q.s. Give one granule every four or six hours. Also, at same time, give this: Calomel, grs. 4; ipecac, grs. 2½; saccharated pepsin, grs. 3. Make into 8 capsules. Directions: One every hour. [Urticaria often indicates faulty diet; if severe, clean out thoroughly, then feed *simply* for a while. Lime salts indicated according to Luff and Wright.—Ed.]

For Eczema.—Ammoniated mercury, grs. 30; zinc oxide, dr. 1; white vaseline, ounce 1. Anoint with this salve three times a day. In case it is for the face substitute lanolin, as vaseline causes smarting. Don't wash the diseased parts (hands or face) till cured, because soap and water, with friction, irritates any rash. The foregoing will cure nine-tenths of all skin diseases. [Always examine urine in severe cases of eczema; often excessive acidity needing correction. Autogenous vaccines have cured some severe chronic cases.—Ed.]

For Malaria in Children.—Calomel, grs. 6; bismuth subcarbonate, grs. 2; saccharated pepsin, grs. 2. Make into 8 powders. Directions: Give one powder every two hours, till the bowels have acted twice. At the same time give this mixture: Quinine hydrochloride, grs. 24; Fowler's solution of arsenic, gtt. 10; aromatic syrup of yerba santa, ozs. 3.

The dosage in the foregoing prescriptions is apportioned for a four year old child. If the fever goes above 102°, bathe the child in tepid or cool water every three hours.

For Chronic Malaria.—Give one or two grains of calomel every two hours till 6 grains have been given. Repeat this dose weekly, until the tongue cleans off. At the same time give the following mixtures: Tincture of hydrastis, ozs. 3; fluid extract of grindelia, ozs. 2; Fowler's solution of arsenic, drs. 2; elixir of calasaya, enough to make ounces 8. Directions:—Take one-half teaspoonful after meals. [In chronic cases of malaria, attention to the alimentary canal is of special importance; seek clinical asepsis. The arsenates of iron, quinine and strychnine, with nuclein, are ideal at this stage.—Ed.]

I may add, in conclusion, that all of the prescriptions herein mentioned have been found by me very helpful and some of them as near to being specifics as anything tried in twenty years of practice.

J. A. Viser.

Whitewright, Tex.

TREATING MALARIA SUCCESSFULLY

In a case of malaria, you are generally called during a paroxysm or during the fever. The following is y mode of treatment:

If the chill is on, give glonoin and atropine (or hyoscyamine), or 10 drops of chloroform (in oil, brandy or a capsule). If vomiting is present, give hypodermically morphine, ¼ grain, and atropine, 1/150 grain; which will stop the vomiting as well as the chill. Now a thorough cleanout with calomel, 4 or 5 grains, and bilein or podophyllin, sufficient. If stomach is irritable, give calomel with phenolphthalein, and follow with saline laxative.

For the next chill, begin with the antiperiodic about eight or ten hours before the expected attack. Give quinine bisulphate, not less than 10 grains, and repeat in four hours; then every four hours thereafter give of it 5 grains until well past the time for the appearance of the first chill and fever. Then give a tonic, which comes last in this series. Cold sponging during malarial fevers is very gratefully received.

Congestive Chill.—The treatment is the same as the foregoing, except that it requires more vigorous stimulation and external heat. Stimulate with quinine in large doses given hypodermically, and keep your patient cinchonized until all the danger is past. If it is the every-other-day chills, then give not less than 50 grains in the above quinine course before the onset of the chill, beginning eight hours before the chill. Tonic follows:

Algid Malaria.—Give hyoscine, morphine and cactoid or morphine and atropine, ¼ grain and 1/150 grain respectively, enough to keep the patient quiet, also give 15 grains of quinine and urea hydrochloride, repeating every four hours until the danger-line is past; intermitting in the interim one dose if it is of the every-day type.

Remittant Fever.—Give the usual treatment as to cleaning out. For the fever of the malaria and for the headache, nothing ever has equalled the acetanilid compound; and, for remittant fever, give equal parts of quinine and acetanilid compound, 2½ grains every three hours until the fever subsides. Then give 5 grains of quinine every two hours for three doses; after that three, four or six hours apart, extending one hour each succeeding dose.

Here is a *tonic* that never has been followed by a recurrence of malaria, unless there was a new infection; this is my formula: Quinine bisulphate, 3 grains; arsenous acid, 1/50 grain; strychnine sulphate, 1/50 grain; ferrous carbonate, 2 grains; podophyllin or phenolphthalein, 1-10 grain. Make into a pill and give one such dose three times a day.

Old negroes are prone to get hiccough from the continued use of phenolphthalein, so, give them podophyllin or aloin.

A. L. Nason.

Maben, Miss.

TO DESTROY THE FLY

A simple method of killing the common house fly, and one which is more effective and more sanitary than "swatting," is to use a solution of formaldehyde, which may be employed as follows:

Prepare a solution of nine parts water to one part of formaldehyde, pour in a flat saucer, and add a teaspoonful of sugar. Place in the middle of the solution a small sponge, piece of bread or rag. Renew solution every day.

INTESTINAL SUMMER TROUBLES OF CHILDREN

The following embodies the experience of more than fifty-seven years of practical professional work.

For summer diarrhea in children up to 2 years of age proceed as follows: Give 1 grain of calomel hourly for three doses [Doctor, isn't this unnecessarily large. We have found small doses—1-10 grain, repeated—equally effective.—Ed.], followed in six hours by castor oil. Give the necessary instructions as to diet or withholding of food. Usually all my patients—even the breast-fed—get only water for the first twenty-four hours after the above initial course; then I resume the cure. For pure dysentery, both in children in adults, give suitable doses of dilute sulphuric acid. In the case of children, in diarrheal cases, if the diarrhea continues after the oil has acted, I give 1-100 grain of bichloride of mercury every two hours until it is controlled, adding for the same age, 2 years, and under that at any age below, 1 grain of salicin every four hours while the patient is awake.

For cholera morbus in adults, give suitable hypodermic doses of morphine, say ¼ to ½ grain, followed at once by 1-grain doses of calomel hourly until the discharges change to a more normal condition.

For urticaria (acute), prescribe a suitable purge and a change of diet. For the chronic form, give arsenic to the limit.

E. H. Sholl.

Birmingham, Ala.

DIARRHEA IN BABIES AND ADULTS

You want some short ones, do you? Well, this is how I treat, and sometimes cure, diarrhea in babies and grownups.

Cut down some part of the diet (everyone to his own notion about that), order plenty of ater to drink, and then, for medicine, prescribe this mixture: Bismuth subnitrate, dr. 1; camphorated tincture of opium, drs. 3; chlorodyne, dr. 1; neutralizing cordial, enough to make four ounces. The dose varies, of course, according to age. An adult would get a teaspoonful every hour or two, and a child of 2 or 3 could stand 20 drops.

In alternation with this, the W-A intestinal antiseptic (three sulphocarbolates) always is given. It may be necessary to give chlorodyne and paragoric, but for those colicky or griping pains it helps.

H. H. Schultz.

Sutton, Nebr.

[Another thing that often helps amazingly in infantile diarrhea is a reliable culture of Bulgarian lactic-acid bacillus, now available in tablet form. Even when milk diet is continued (it is usually ordered discontinued at once) the use of these tablets often brings the stool back to its normal color, odor and consistency.—Ed.]

DYSENTERY OF INFANTS AND CHILDREN

One of the most difficult diseases of children to treat is dysentery. This, briefly, is my ordinary treatment.

First give castor oil, either plain or medicated. [Laxol?—Ed.] This should be given n teaspoonful doses every two hours—for a child two or three years old—until it operates. Afterward prescribe the following mix-

ture: Camphorated tincture of opium, aromatic syrup of rhubarb, saturated solution of sodium and potassium tartrate, 1 ounce of of each. Label: Give one-half teaspoonful every two or three hours. This usually will relieve the abdominal pain and tenesmus, which is always so distressing in this condition.

Should the tenesmus continue, the following suppository, one to be inserted two or three times a day, will act well: Opium, grs. 2; extract of hyoscyamus, gr. 1; cocoa butter sufficient to make six suppositories.

The amount of opium in the two foregoing prescriptions should be regulated, of course, according to the age and weight of the child.

It is best to sponge the patient's entire body with lukewarm water two or three times a day. If the temperature is high, give tepid or cool baths. Keep the child's abdomen protected by woolen bandages. Give plenty of water, not ice water, but cool and pure. As the patient recovers, gradually discontinue medication. R. B. Hopkins.

Milton, Del.

ACUTE INFLAMMATORY RHEUMATISM

Yes, acute inflammatory rheumatism happens to be a summer disease here in this section of the country, up in Montana. Crops are grown by irrigation, and it seems that each summer, after starting to water the crops, a large number of cases of acute arthritis occur. My treatment, which is very successful, is as follows:

An initial cleaning-out with calomel, podophyllin and soda, in divided doses, is followed three hours later by a large dose of saline laxative or magnesium sulphate. Then the patient is placed upon a liquid or semi-solid diet and ordered to rest in bed or at least in a recumbent position.

Now sodium salicylate, 10 grains, or aspirin, 10 grains, is given every two to three hours until the patient feels easier, then less often. At the same time a tablet containing the following combination is given every four hours, viz.: Boldine, 1-64 grain; macrotoid, 1-12 grain; bryonin, 1-128 grain; colchicine, 1-250 grain; salicylic acid, 1 grain. This is the formula devised by Dr. Candler, and the remedy has acted well in all cases under my care for several years past.

I always neutralize the acidity of the urine by ordering alkaline drinks; water containing ½ to 1 dram of sodium bicarbonate to the quart, with a little lemon-juice to make it more palatable, does nicely.

Along with this medication I employ a Betz hot-air apparatus, giving the patient a thorough baking every day, running the heat up to about 450°F. These treatments quickly relieve the painful parts and are very acceptable to the sufferer. From an experience with a large number of such cases, I feel sure that the combined internal medication with the hot-air treatments brings a quicker cure than either alone.

I have used the modified rheumatism vaccine in several serious cases and obtained remarkable results; but all patients will not take this treatment, as the cost is high and some object to the injections. Recovery is very rapid in these serious cases. However, subsequent attacks occur, and they are almost as bad as those before this treatment was taken. This is contrary to the claims made for the vaccine treatment.

Following the lines of care as laid down here, with some variations, will prove effective in almost any case of acute inflammatory rheumatism. F. E. McCann.

Salesville, Mont.

EXTERMINATION OF LICE

In the February issue of The American Journal of Clinical Medicine, on page 159, I noticed an article taken from *The Lancet*, in which Whitfield recommends steeping the hair for ten minutes in a 1:400 phenol solution for the extermination of lice in women patients, and adds: "taking care to see that the nape of the neck and the hair over the ears are well soaked, the patient lies on her back, with the head hanging over the edge of the bed, the hair in a basin," etc.

From a textbook I cull the following:

"Treatment: Petroleum (pure) and balsam of Peru, equal parts, poured over the head, rubbed in with a white flannel; in twelve or twenty-four hours lice are destroyed. Shampoo with green soap, pure vaseline, or scented castor oil."

Similar treatments are to be found in the textbooks of all our great authors on theory and practice of medicine. What "tommyrot" these great authorities give us for our enlightenment. Certainly, these agents will kill lice—so would a sledge-hammer. But is it best to use it?

Did any of these great men ever use a microscope? And did they never view through it the spiracles of lice, fleas, flies, and all such insects and dipteras? The anatomy of the breathing apparatus of all of them is almost identical.

Every farm-housewife knows enough to apply lard to the head under the wings and on the breast of a lousy hen. And it does the work thoroughly, too. This is practical common sense *versus* the scientific (?) conclusions of the learned Solomons.

Now permit me to say that I have a remedy for exterminating lice that I have used for twenty-five years with unfailing success.

It may be despised by some of the erudite Esculapians because of its cheapness and simplicity. However, it is death to all kinds of lice, the pediculi capitis, p. corporis, or p. pubis — whatever their name or wherever their location. It is simply hair-oil—any nice hair-oil.

Let a woman or girl, man or boy troubled with lice oil the hair thoroughly at bedtime. In the morning all the lice will be dead. If there are nits, repeat twice or three times at intervals of a week.

I submit that to the average man or woman this is more acceptable than "red percipity" or phenol.

E. D. WING.

Galesburg, Ill.

[Who can give a better remedy for those afflicted with this troublesome parasite, which gets into the hair of so many children—especially those of the congested districts? Some of our schoolma'ams get to be experts in the treatment of these youngsters, and many of them claim good results with tincture or infusion of larkspur, applied freely where it will do the most good. It is harmless. Let us hear from the "family." —ED.]

RHINOPHYMA—AN EXAGGERATED CASE

I send you by this mail, under separate cover, a photograph of what to me has been a very interesting case of acne rosacea. It is interesting especially on account of the exaggerated hypertrophy, which must be very rare, for I have never seen another case that approaches this in the size of nodules, that are very disfiguring and a source of much embarrassment to this patient. In fact, it has converted him from an energetic business man and expert accountant into almost a recluse, for the reason that he wishes to avoid meeting people and hearing the whispered remarks so constantly made in his hearing.

To illustrate the nature of some of the expressions of surprise he would overhear made about him sometimes, there is a little story that is told here, that a while before he gave up all active employment and quit mixing with his fellows he was behind the counter in a grocery store, where he was working temporarily, and a little boy who had never seen him came in to buy a nickel's worth of peanuts. As the boy walked up to the counter, not seeing the old man's face, which was turned the other way just at that time, he said, "Mister, give me a nickel's worth of"—then, suddenly getting sight of the old man's nose, he started for the door, saying, "Oh, good God, what a nose," and never stopped to buy any peanuts at that store.

Dr. Strong's case of Rhinophyma

If you think this picture published in the journal would be of interest to your readers you may publish it with any remarks you may wish to make in regard to it.

B. F. STRONG.

Norborne, Mo.

[Following is a brief discussion of the treatment of rhinophyma, kindly submitted by

Dr. David Lieberthal, a prominent dermatologist of this city. Another paper upon the same subject, by Dr. E. A. Fischkin, also of Chicago, will be found in the leading article section, page 664, this issue.—Ed.]

TREATMENT OF RHINOPHYMA

For the correction of the deformity known as rhinophyma, which is caused by intensive hypertrophy of the connective tissue and the sebaceous glands of the nose, either mild forms of treatment may be employed, or else surgical means. The x-rays and also radium prove, at times, of great benefit. The same may be said of carbon-dioxide-snow applications.

The radical, or surgical method is either that by thermocautery or by the knife. With the flat cautery blade at red-heat smaller or larger areas are leveled down at weekly or fortnightly intervals, in the meantime dressings of boric-acid solution or borated vaseline being applied. The cold-cutting operation is performed, under general anesthesia, in two or more sittings, and consists either in excising wedge-shaped pieces and suture, or leveling off the tumor-masses by placing the blade flat upon the normal skin and cutting downward through their bases.

In employing the radical methods, care must be taken not to cut too deep, in order not to injure the cartilage; this being guarded against by placing a finger into the nostril and thus controlling the movement of the knife. Hemorrhage is considerable, but stops upon pressure. The after-treatment is the same as is used after thermocautery application.

In thus modeling the nose, it is well to be guided by a photograph of the patient, taken previous to the development of the rhinophyma. Inasmuch as the ducts of the copious hypertrophied sebaceous glands are extending from the surface of the tuberosities deeply into the subjacent tissues, their lower ends present, after the operation islands, from which epithelialization, or epithelial covering of the wound, takes place.

In some cases, after the parts have assumed normal size, it is necessary to employ rational external applications, for a complete cosmetic result.

David Lieberthal.

Chicago, Ill.

CORRECTION

In the article by Dr. F. F. Young, of Covington, La., on page 602 of the July number of Clinical Medicine, the statement is made that "this case occurred about two years ago."

This should have read "twenty years ago." Shortly preceding, the statement was made that in the interval the patient had five or six children, thus making the subsequent statement ridiculous

There is also an error on page 601. Instead of "five hours," in line 27, it should read twenty-four hours."

CANNED GOODS

The article in the February Clinic by Dr. Charles F .Lynch, on the canned-food industry, is most interesting, and is one that I wish every housekeeper might read. The enormous amount of fraudulent canned goods—meats, vegetables, fruit, etc.—that are daily palmed off on the public, especially in this country in late years, is astonishing, and almost beyond belief.

Take, for example, the matter of canned beef. I have been informed by a person who was interested in the stock-yards at Chicago that formerly only cattle of good quality were used for canning purposes, while now, during the last fifteen years or so, the canning-houses utilize the cullings of the slaughter-houses, inferior beeves, cattle having broken ribs and broken legs. One cannot today buy a can of beef that will begin to compare with the goods on the market in former years. Instead, nowadays the tinned beef is two-thirds stringy pieces of meat and one-third tallow.

And this criticism is equally true, as to quality, of the other canned goods now offered. Thus, the canned corn now on the market is nothing more than ordinary field-corn. Canned fruits are put up with starch-glucose sweetened up with saccharin—a preparation about as fit for the human stomach as is arsenous acid.

Unfortunately, this fraudulent use of saccharin will probably go on saturating, so to speak, the people with this slow and deadly poison until the mortality occasioned by its constant ingestion becomes sufficiently alarming to awaken the people or drowsy legislators to a realization of the necessity of prohibiting its fraudulent use, making the penality for such use a term in the penitentiary, instead of a farcial fine which the rascals can soon recoup, over and over again, from subsequent sales to their guileless victims. In view of the great abundance and low price of cane-sugar, there is absolutely no necessity

or excuse for the substitution of a poisonous coal-tar derivative in its place.

There are, probably, no other people on the face of the globe who are subjected to such impositions and fraudulent practices as ours, who would so tamely submit to them, even after the fraud is plainly pointed out to them. Barnum hit the nail squarely on the head when he said that the people liked to be humbugged. GEORGE D. STANTON.

Stonington, Conn.

[Really, as a loyal Chicagoan, I must rise to the defense of our principal industry. I have been in "the yards," not once, but many times, and I have seen, I believe, most of the departments and processes in the big packing establishments. Occasionally some sensation-monger may uncover something that is not exactly as it should be in the killing of animals and the preparation of meat for the market; but, all things considered, it is hard to find any business where more painstaking care is taken to turn out a cleanly, nutritious food products.

It is true, of course, that the best qualities of beef do not go into tin cans. Naturally the older, thinner animals are used for that purpose; but the meat employed is sound and free from disease, and it is thoroughly cooked so as to make it tender and palatable. A visitor to the "yards" is struck by the large number of Government inspectors (they are all graduate veterinarians) who are employed to inspect the animals before and after slaughtering. It is a clever man, indeed, who can get an unsound animal past their watchful eyes. The fact is, if you want to be sure that the meat you are eating is from healthy animals you will eschew that killed by the local butcher, often in some inconceivably filthy shambles, and will ask for Chicago beef!

Perhaps Dr. Stanton is right about the poor quality of canned corn offered for sale in some sections, yet I am sure most of the poor corn is also *cheap corn*. It is quite possible to purchase excellent canned corn, as the writer knows, because he likes it and buys it often—and he doesn't have to pay a prohibitive price.

The use of saccharin in any kind of food sold in interstate commerce is now prohibited by federal law, so that there is no cause for alarm regarding this "sweetener." But, to speak personally again, I am not at all afraid of saccharin, which in the quantities used as a sweetener in canned goods seems to me, if anything, less harmful than cane-sugar in the excessive amounts in which most of us Americans eat it.—ED.]

SOME OBSERVATIONS ON THE USE OF THE OBSTETRIC FORCEPS

I have been much interested in Dr. Rittenhouse's articles, and I agree pretty generally with what he writes. However, the Doctor did not mention two advantages that have been of great value to me. Of the different kinds of instruments, the Hunter is the only one for which I have any use. In delivering lengthwise in the bed, it is often difficult to depress the handles of a long instrument sufficiently to apply them, owing to the patient's sinking into the mattress. Here, the Hunter finds its most important use. In these cases, I have applied the blades when the head had not yet entered the superior strait and the handles have practically disappeared in the vagina. By taking hold high enough we can almost get the axis-traction effect, though I do not recommend this instrument for the hardest work, as the blades, being small, are liable to sink rather deeply into the cranial bones.

For application on the after-coming head, also, I think these blades are far superior to the instruments with the ordinary length of handles.

It is quite true that the axis-traction effect can be perfectly gained by tapes or traction-rods through the fenestra of the Hodge or any similar instrument, but, as this method requires an assistant and one may not always be at hand, I always carry my Tarnier with me, and it has helped me out of some difficult positions.

Some doctors seem to have a dread of the axis-traction instruments, as they think it makes greater pressure on the head. It is true, we can get much greater force with them, but with traction in the proper direction we accomplish the work with ten to fifteen percent less force than otherwise. This can be demonstrated by what is known to mechanical engineers as the "paralellogram of forces."

I fully believe that nothing is gained, but much lost, by exaggerated curves, both pelvic and cephalic. When an instrument slips, it is from one of three causes. First, we have relaxed the compression (this cannot occur with instruments having a positive lock, as the Hunter and the Tarnier); second, we have applied it on an oversized or a hydrocephalic head; third, the head will not enter the superior strait. In the first two cases, the head

may slip through the tips lengthwise; in the third it commonly works out transversely to the blades. Very broad blades, as those of the Hodge, obviate this tendency somewhat; but, of course, if there is great difficulty at the inlet of the pelvis, we are approaching the limitations of the forceps. Occasionally, too, the wide instrument is difficult to apply in a narrow vagina.

For ordinary use, some of my friends think that the Simpson is the only thing. It is an excellent instrument, but to me there is no practical difference between the Simpson, the Elliott, and the Jewett. I do not care whether I use a French or an English lock. A late invention in the axis-traction order is the Dewey forceps. This has a positive indicator, enabling one to pull exactly in the proper direction, but it is rather cumbersome, and I have never cared to change my Tarnier for one of them.

I had at one time, a great fancy for the solid-bladed Tucker McLane. I have long since abandoned this kind, as I find it difficult to make it hold without making an immense degree of compression; it also has a strong tendency to slip transversely in the higher positions.

H. O. Carrington.

537 W. 147th St.
New York City.

STATES OF UNCONSCIOUSENESS: SYMPTOMATOLOGY AND TREATMENT

Unconsciousness has been defined as insensibility. This is not absolutely correct, for in normal sleep we have a condition of unconsciousness, yet one could not, by the greatest stretch of imagination, say the subject was insensible when we know that he will react to even the slightest stimulus, as the touch of a hand, the prick of a pin or a puff of air.

It is not, however, my intention to discuss the physiology, but rather the pathology of unconsciousness, its etiology, diagnosis and treatment; not, indeed, at any great length, but hitting the high places, as it were, giving the most salient differential diagnostics.

How are we going to find the causes when called to treat one who has suddenly become unconscious? For without knowing the cause we cannot intelligently treat,

Wherein shall we find the difference between sunstroke and heat-exhaustion?

Sunstroke.—Here the onset of the attack is sudden, and it is due to the direct rays of the sun. It, therefore, occurs out of doors; the person's skin is dry and very warm; there is pyrexia—a temperature of 105° to 107° F., and even higher. Dyspnea is marked, the pupils are at first dilated and later contracted, the pulse is very rapid, and, in addition to the unconsciousness, there may be convulsions.

The patient is in danger from the hyperpyrexia. Therefore, reduce the temperature and do it quickly. Nothing is better than rubbing the body with ice, the cold bath, cold pack, cold effusions, or cold enemas; besides the hypodermic use of quinine bisulphate or of antipyrin. Should the temperature tend to rise again, wrap the patient in a sheet wrung out of cold water. Only in case of convulsions is the hypodermic use of morphine indicated. Should depression occur, give strychnine sulphate hypodermatically. Hypodermoclysis or enteroclysis may be indicated.

Heat-Exhaustion.—The onset of heat-exhaustion is gradual, being preceded by premonitory symptoms, as dizziness, headache, nausea, and vomiting. It is not due to the sun's rays, but to excessive heat in close, stuffy quarters, such as factories, engine-rooms, boiler-rooms, power-houses. The skin is moist, clammy and cold, and the temperature is normal or subnormal.

Unlike in sunstroke, we require here heat and stimulation. Place the patient in the recumbent position, with the head low. Hot applications are of great value. Give brandy or whisky, one-half to one ounce, or aromatic spirit of ammonia, 1 dram in hot water or hot milk. If the patient is unable to swallow these remedies, they may be administered by enema. Also give strychnine or digitalin hypodermically. [These may properly be associated with glonoin.—Ed.] As convalescence begins, tonic doses of quinine or of iron, arsenic and strychnine should be prescribed.

Apoplexy and Uremia.—Apoplexy occurs at or past middle life. We shall find in the victim arteriosclerosis, and this may be of luetic origin. There may be prodromes, such as vertigo, transient blindness, deafness, or local palsies. Although usually the attack is sudden, with hemiplegia, stertorous respiration, flapping of the buccinators on the affected side (that is, opposite the lesion in the brain), the temperature is first subnormal but soon becomes above normal. The pupils are dilated; although, if the hemor-

rhage be into the pons, we find pin-point contraction, while in uremia we find the characteristic suborbital puffiness due to nephritic conditions. The temperature is subnormal and remains so. There is an absence of stertor and paralysis. The tongue is dry and fissured, the odor of the breath is urinous, and there is more or less general edema.

In the case of apoplexy, immediately put the patient in the recumbent position, the head being elevated and turned to one side. An ice-cap should be applied to the head, and a hot mustard foot-bath given if the arterial tension be high. Venesection, or vascular sedatives like the tincture of aconite or of veratrum [better aconitine or veratrine. —Ed.] must be employed. Give croton oil, 1 to 2 minims to produce free catharsis. Later the patient should be put on antiluetic treatment, if indicated: mercury, iodides, mixed treatment, or, better still, salvarsan.

In treating uremia, it is imperative to produce elimination through the skin, kidneys, and bowels. Give a hypodermic of pilocarpine, gr. 1-10; hot-pack or hot bath; calomel in broken doses every half hour; croton oil, 1 to 2 minims; also, venesection followed by hypodermoclysis, to dilute the toxins and stimulate the kidneys. Convulsions may be controlled by inhalations of chloroform.

Epilepsy and Hysteria.—Epilepsy may be preceded by an aura or the attack may be sudden. The limbs are extended, the hands are clinched and rigid; the spasm is first of the atonic, then of the clonic variety. The face is cyanotic, with frothing at the mouth, and the subject is very apt to bleed from having bitten his tongue or lip. The pupils are dilated, and the eyeballs turned or rolled upward.

In hysterical unconsciousness the coma is not complete—the patient will resist if attempts be made to open the eyes or move a limb. The attack usually comes on in the presence of others with a fit of laughing or crying, while the epileptic condition is no respector of time or place. The temperature, pulse, and pupils are normal. There is no frothing or bleeding from the mouth. In fact, these patients are very careful not to injure themselves, although they pretend to be paralyzed or choking (globus hystericus). The patient usually is a female, and the attack ends, as it started, with a spell of laughing or crying.

An epileptic attack is treated by placing something between the victim's teeth to prevent biting tongue or lips. Give hypodermatically hyoscine hydrobromide, gr. 1-100, to control the convulsion, and place the patient at rest in a dark, quiet room. Then give stimulants (digitalin) for the cerebral anemia. This for this particular attack.

Later, the patient should be placed on the bromides combined with cypripedium, as: Potassium bromide, ozs. 6; ammonium bromide, oz. 1; fluid extract of cypripedum, ozs. 4; tincture of opium, drs. 4; water, enough to make pint 1. Label: Take one dram before meals.

So far as my knowledge goes, this prescription is empiric, though I know of two cases in which an absolute cure was effected by it. The peculiarity of this treatment is this: that during the first three or four weeks the attacks are more frequent, then gradually become milder and less frequent. The treatment should extend two years beyond the last attack. [We urge the use of solanine, as a nerve sedative, to replace the bromides. Prof. T. G. Atkinson, of the Chicago College of Medicine and Surgery, reports remarkable effects from its use. Another remedy rendering good service is verbenoid.—Ed.]

The treatment of hysteria demands, above all, denying of sympathy. Be kind but absolutely firm. Charcot recommends making firm pressure over the ovaries. Of the various drugs recommended (including Hoffmann's anodyne, spirit of ammonia, valerate of ammonia), I find that a hypodermatic dose of apomorphine hydrochloride, gr. 1-10, will bring the hysteric female to her senses quicker than anything else .

Alcoholism, and Opium Poisoning.—Alcoholic intoxication always presents the odor of liquor, but this alone should not make the diagnosis, since some well-meaning friend may have given the whisky after the onset of the unconsciousness. There is deep stertor, but the subject may be aroused by shouting into the ear or by making pressure over the supraorbital nerve. The patient will close his eyelids if attempt be made to touch the eye-ball. The face is flushed, the pupils are dilated, there is no paralysis, but a bilateral helplessness.

In opium poisoning, we have the pin-point pupil, respiration is slow and shallow, the pulse is full and strong, the skin at first is flushed and warm, later becoming cold, clammy and livid with the characteristic dirty-yellow pallor; there is no paralysis.

Treatment of alcoholism calls for emptying the stomach by the use of a stomach-pump or the hypodermic injection of apomorphine.

Also give spirit of ammonium internally. Place the patient in a warm bed, surround him with hot-water-bottles; and give strychnine, digitalin or nitroglycerin, to sustain the heart. For the delirium give 1-100 grain of hyoscine hydrobromide hypodermically. As soon as possible procure rapid elimination by bowels and skin, using appropriate remedies.

The treatment of opium poisoning consists in giving potassium permanganate, 10 grains, dissolved in plenty of water if called in the case early. The stomach must be evacuated promptly. Respiration should be maintained and the circulation supported—atropine, strychnine and digitalin. Give strong, black coffee and apply flagellation, to keep the patient awake.

Compression and Concussion.—Compression, as the name implies, is pressure upon the brain, the most common cause being fracture and depression of the skull; or the pressure may be due to a ruptured vessel, producing hemorrhage, either extradural or intradural. Tumors, gummata, and abscesses are also etiologic factors.

The pulse, in this condition, at first is full and slow, later becoming rapid and irregular; there is stertorous respiration and much puffing of the lips and cheeks, the stertor being due to paralysis of the soft palate, the puffing to paralysis of the facial muscles. The compression being usually unilateral, the pupils are asymmetrical, that on the corresponding side being dilated. There is paralysis of a group of muscles or an opposite hemiplegia, this paralysis causing retention of the feces and urine, followed by involuntary defecation and micturition from distention. The temperature may be cool, but usually is hot, with perspiration, and it differs on the two sides of the body.

Concussion or stunning varies with the severity of the cause, from a slight giddiness, vertigo or a confusion of thought to complete unconsciousness. Being closely allied to shock and rarely as deep as the coma of compression, the patient can sometimes be aroused by shouting. There being no paralysis, the muscles are flaccid and relaxed. Therefore, we find an involuntary evacuation of the bladder and bowels.

While the muscles are relaxed and the coma is not deep, yet the patient will resist any attempt on our part to move a limb or to open his eyes. The pupils are equal and unless the unconsciousness is very profound will react to light. The surface of the body is pale, cold and clammy, with a subnormal temperature. The pulse is weak and fluttering. Respiration is slow, shallow and sighing.

For cerebral compression, trephine the skull, raise or remove the depressed portion of bone, or, if the conditions be due to tumor, gumma, clot or abscess, such may be removed or drained (accordingly) through the trephine opening. Keep the bowels open and bladder empty. Keep the patient in the recumbent position, with the head low and kept cool by means of an ice-pack; and regulate the temperature. Should the latter be low, give stimulants; if too high, use the cold-pack or sponge-bath. Respiration often is interfered with by the tongue falling backward; to avoid which, turn the head to one side or pull the tongue forward.

In concussion of the brain, as in the treatment of shock, place the patient in bed, and cover him with blankets or apply hot-water-bottles, and cause friction to the surface of the body. Stimulation should be avoided, for fear of exciting cerebral hyperemia or hemorrhage. The bowels should be made free and active by the use of calomel to croton oil. The room must be kept dark and quiet. Nourishment may be given with a spoon, while in severe cases nutriment may be introduced rectally or per nasal tube into the stomach.

A. A. GEBHART.

Rogers, Ark.

GENERAL SIBLEY'S PRAYER

I have read Dr. George D. Swaine's excellent story, "The Quality of Courage and a Chloroformed Indian," on page 608 of your magazine for July, 1913. I have enjoyed the portion of it devoted to General Henry H. Sibley's experience upon Bigstone Lake, but fear it does a grave injustice to the memory of one of the great men of the Northwest. General Sibley was a religious man, from his youth up, coming from a family of sound religious practices, his father an Episcopalian and his mother a Moravian. General Sibley made a public profession of religion at Mackinac in 1830, when 19 years of age, and joined the First Presbyterian Church at that place.

When the missionaries came to Minnesota in 1835, he was their ablest supporter and assistant. He joined the church which they organized at Fort Snelling and was an officer of it for many years. When, however, an Episcopal church was organized at St. Paul, he affiliated with it and was a vestryman of it

as long as he lived. He was exceedingly chaste in his speech and was never known to use profane language.

DOANE ROBINSON,
Pierre, S. D. *Secretary and Superintendent*
Dept. of History, State of South Dakota.

CACTOID IN SEA-SICKNESS

During the two last voyages of the ship Voltaire, from New York to South America, of which I am surgeon, I have had to attend but one severe case of sea-sickness. This is excellent testimony in favor of sea-voyaging in these waters, but it gives us little information as to the action of cactoid in sea-sickness, a drug with which I am now experimenting.

The case noted above was that of a fat, middle-aged woman in whom the disturbance had advanced so far that she was unable to raise her head from the pillow without its provoking the act of vomiting, nor was she able to retain anything swallowed. One full-strength H-M-C tablet, given hypodermatically, gave her a happy issue out of her affliction.

I have found cactoid of undoubted service in the "stage of uncertainty" and before the severe stage of *mal de mer* above described becomes established. Its action may be likened to that of a force which carries forward a wheel "stuck on the center."

I append a few illustrative notes.

Case 1.—Italian lady, about 50 years, good physique; suffered headache, lassitude, dizziness. I gave her ten granules, one to be taken every twenty minutes, until better. Prompt restoration. She asked for more.

Case 2.—Brazilian lady, 40 years, good health. Usual preliminary symptoms. Treatment as in Case 1. Recovery. She asked for more granules.

Case 3.—Italian girl, 19 years. Good physical condition. Not depressed or otherwise disturbed, but could not retain her meals. This is a common condition and the vomiting resembles that of certain cerebral disturbances in not being preceded by nausea. A few granules of cactoid gave prompt relief. She asked for more. (I do not know whether this "Oliver Twist" characteristic is referable to sea-sickness or to cactoid!)

Cases 4 to 9.—These are so alike that they may be described as one. Six strong, healthy men, from 25 to 30 years, lying in their bunks, moderately ill and too indifferent to get on deck. Sea rather rough and vessel lively. I gave them each six granules. They were all on deck in a few hours and not again disturbed.

I have not yet tried cactoid hypodermatically, and do not know whether it is recommended to be used in that manner. If yes, it might be serviceable in advanced cases, where the stomach retains not even a spoonful of liquid.

S. AUSTIN DAVIS.
Brooklyn, N. Y.

PILOCARPINE POISONING. ALSO TWO CLINICAL PROBLEMS

Case 1.—*Nausea of pregnancy.*—There was no vomiting, but uninterrupted nausea; also aversion to food, with consequent loss of weight from starvation. Copper arsenite was tried, with some temporary benefit; colchicine also was temporarily beneficial. Nothing, however, gave either complete or permanent relief, till sodoxylin was tried. This cured promptly. The medicine was stopped after two days, and the nausea did not return.

All the time the patient's urine was persistently *alkaline*. There is a history of an attack of acute cystitis five years ago, but no symptoms since that time were observed, and there are none now, except that tests of the urine suggests a mild chronic cystitis. Please explain.

Case 2.—*Stupidity.*—Boy of 7 years. Family history: Maternal grandfather, a retired physician, suffers from senile dementia at the age of 75 years; is said always to have been peculiar. This man had five children. The first, second and fourth died young. The third, who is the present patient's mother, is normal, as is also the youngest of the five. Family history otherwise negative.

Previous history of the little boy: Congenital diabetes insipidus, which was gradually outgrown; but the amount of urine is still above normal, averaging 40 ounces in twenty-four hours. As a little child, the patient was unusually bright. At 4 years, he was able to read in the First Reader, although he had never been to school, and had only a little spasmodic teaching from his parents. At this period, his brightness gave place to extreme mental dulness and stupidity. He forgot how to read, was loud-voiced and noisy, but never developed an idea of his own, merely repeating what he heard others say; memory was greatly impaired. Otherwise he seemed perfectly healthy, as frisky

as a young colt, could easily run a mile without stopping or getting tired or winded. He grew very fast and is now as large as the average boy of ten or twelve.

Since the onset of this mental trouble, the child has had no diseases, except an occasional cold; but previous to his third year he had measles, pertussis, and nematodes. At ten months, he had an attack of amebic dysentery, which nearly ended his life.

He has been under medical care from time to time for the mental trouble, and various remedies have been tried, but the only one which has done him any good is effervescent saline laxative, in a daily small (diuretic) dose. Five or six weeks of this treatment brings the mentality up to normal, where it will remain without use of the saline, for a week or two; then he relapses till the saline is again resorted to. Several other laxative salines have been tried, but none have given the same benefit. Several times he has had a thorough course of "clean-out and clean-up" treatment, with the combined sulphocarbolates, and with sodium sulphocarbolate alone, both being followed by galactenzyme, and all remedies being pushed to effect; but they have no observable effect on the boy's mental condition if the saline is not administered at the same time, while, if this is given, the others add nothing to the treatment.

He has been observed to be brighter during the orange-season. Whenever he is eating as many oranges every day as he wants he does not need the saline laxative. The orange being a mild diuretic, various other diuretics and urinary antiseptics have been tried, but without influencing the mental condition.

Chemical uranalysis has been made from time to time. Usually nothing abnormal, except for the large quantity, is found. At one time a temporary hyperacidity was promptly reduced to normal by sodoxylin, but without the slightest effect on the mentality. No indican has ever been found, no acetone, no sugar, no albumen. Physical examination is negative—every organ appears to be normal.

It seems to me that the evidence, such as it is, indicates that the trouble is caused by an autointoxication. But that is as far as I can get. What produces the toxin, and where? What will cure or remove the cause?

Case 3.—*Pilocarpine poisoning.*—A boy just two years old, and the picture of health, climbed upon a chair from the seat to the arm, and thence to a table, where he found a box of tablets which had been dispensed for an older member of his family. Each of these tablets contained 0.005 of pilocarpine nitrate, 0.005 of arsenic trisulphide, and 5 minims of solution of sodium triticonucleinate. The family were attracted by his falling on the floor.

When I first saw the child, about an hour after the accident, he presented a startling picture of the extreme effect of pilocarpine. Muscular relaxation was so complete that he was practically paralyzed. Almost the only muscles he could use were the small vocal and ocular muscles, and these were pretty weak. The skin was bloodless and cold. There was no sweating, on account of the age of the child and the excessive dose, but the other glands were active enough. There was coryza, bronchorrhea, sialorrhea, etc.; respiration rattling; no pain or other symptoms.

I gave emetine, 1-3 grain, which acted immediately, bringing up yellow granular material equivalent in amount to about two tablets. The stomach was then washed out two or three times, the water coming away perfectly clear. Then I gave atropine. Four hours later, the little fellow was running around, well, except that he was still a little pale and very thirsty, but if allowed to drink all he wanted he would throw it up. I told the mother to give him water by the teaspoonful, and this he retained. The next morning thirst was still a little excessive, but otherwise he was as well as ever.

The scattered tablets were picked up and put back in the box, which was then half full, as near as could be gauged by the eye. I counted the tablets and found 155. The box had been left full the evening before, and only two or three doses had been taken out of it. The baby must have eaten and absorbed at least 100 tablets—probably more—equivalent to 8 grains or more of pilocarpine nitrate.

This baby also took 8 grains of arsenic sulphide, which produced no symptoms at all. Is this drug really the dangerous poison it generally is believed to be by those who have never tested it? Or is it time to stop being afraid of the word arsenic in the name of this compound?

CHAS. F. MORRISON.

Apopka, Fla.

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[Whatever became of the pilocarpine and arsenic, the baby *could* not have absorbed the quantity stated; had he done so there would have been a funeral—sure! Probably the emetics and the stomach-washing brought

up much more of these substances than seemed possible. Arsenic *is* an extremely dangerous drug. The other two cases are of extreme interest, and we hope our readers will discuss them. Let us have your opinions.—Ed.]

THE WORM TURNS

It takes a long time for news to arrive at Podunk, or at least to make an impression on its inhabitants. I guess that must be the reason why it has just now, June 1, filtered into my bean what the surgeons of America are up to.

This new society, The American College of Surgeons, is a very amusing affair. It makes me mad, though, the more I think about it. I don't object to the society, *per se*, in the least, but I do object—and most strenuously—to the underlying assumption, viz., that any kind of an M. D., or possibly only a licensee without the M. D., is fit to be allowed to doctor fevers of all kinds and chronic disorders of the circulatory, excretory, digestive and nervous systems, that require only indirect treatments, while only an especially trained man is to be allowed to treat diseases locally. The bulk of surgical cases are pronounced such, and referred to surgeons by humble general practitioners of medicine.

Dr. G. Prac is expected to keep himself posted on the latest methods of diagnosis and to be able to distinguish a medical from a surgical disorder at a moment's notice. The diagnosis must be made at all times of day or night, by tired and worn-out doctors, without help—and too often without the sympathy of the family, once an operation has been suggested. If the case comes to operation, and that is successful, the surgeon gets the credit. If it turns out unsuccessful, the doctor is blamed. "Waited too long!"

Any regular M. D. with surgical aspirations, posessing what we call "natural Yankee mechanical ability," can become a good surgeon if he has a chance to practice, i. e., just as good a surgeon as a physician. If he hasn't brains to begin with, he won't be a genuine success at either. But the underlying assumption of the new society is that surgery requires exceptional skill, and what is quite as important, that surgeons are more skilful than ordinary M. D.s. The promoters claim that the teaching of surgery in our schools is deficient. Amen! How about therapeutics?

What proportion of the M. D.s being graduated from any medical school in the country has ever observed, much less treated, a case of diphtheria from start to finish? (I practiced medicine for over nine years before I ever saw a case.) Or doctored scarlet-fever, or even a protracted case of grip with cardiac complications? Or been responsible for a case of diabetes (which I have yet to see), or puerperal fever, or even a case of catarrhal croup with suffocation threatening?

On the other hand, these men have seen cases of appendicitis galore operated upon, until they cut the clinics, so tired were they of hearing the same old tale, "First we cut through the skin, subcutaneous fat, muscle," etc., etc., etc.,—you all know the different layers. Hysterectomies are common sights. Prostatectomies are frequent. Mastoid operations are passed by in contempt. And any second-year student knows the coverings of the various forms of hernia, and how Mr. Bassini advises that they be fixed.

As a matter of fact, the only thing the modern graduate from any of our eastern schools does know anything about when he is graduated is surgery in all its various branches. And the one thing he is densely ignorant about is drug therapeutics. I don't blame the boys. They know as much as their teachers, if some of the ex-laboratorio statements which have been appearing in recent medical journals (*in re* cactin, for instance) are fair samples of what their professors know about therapeutics. They can nearly all of them diagnose the major surgical diseases; and if they can't, they can at least make an exploratory incision or get someone else to do it, and so be on the safe (?) side anyway. But how many of them can give an opinion that is worth the breath it takes to utter it when measles, German measles, and scarlet-fever are all epidemic in the community at once?

My opinion is not worth a whole lot even yet, and it was worth still less ten years ago. And during my first few months of practice I don't think that any of my timorous, suspicious, deadbeat patients were in as much danger of a hasty operation for gallstones, or appendicitis, or an unjustifiable laminectomy at my hands as was the whole town because of lax quarantine, owing to my hesitating and questionable diagnoses of exanthemata. No, no, defective teaching cannot excuse the birth of this new organization.

I was once talking to a very skilful surgeon who has made for himself a well-earned reputation. He took up surgery immediately after graduation, and had never seen general practice, particularly obstetrical work. He was in a small city and treated every case that

was referred to him, medical as well as surgical. "Do you take obstetric cases?" I asked. "Only in consultation" was his reply. Why should anyone want him as a consultant? I'd rather have old Dr. Jones from the next town, with his faulty surgical technic and rubber-handled forceps than the aforementioned professional consultant.

How many surgeons outside of the very biggest cities turn down medical cases if they can be sure of their fees? How many of you men calling yourselves by that delectable name, "surgeon," feel able to fill the shoes of some of our good old-fashioned—no, *new*-fashioned country doctors who are sending their occasional surgical cases to you for operation?

There is Dr. X, my neighbor in the next town of Squedunk, who attends to all his obstetric difficulties himself (did a Cesarean section once by candle-light; and the woman got well too—but it didn't get reported in the *J. A. M A.*). He sets broken bones and gets good results. He fits glasses, and does it pretty well, too. Once in a while he straightens out a refraction case that one of you fellows in the city failed on because you were too hurried to use a mydriatic. He has never yet had to intubate a case of nondiphtheritic croup, because he knows how to use aconite, spongia, and calx iodata. He has a microscope, and knows a cast when he sees it. And when it comes to fevers, he can make all of you feel silly. His cases are not as protracted as they are in the hospitals in your city, and his patients are more comfortable during the process too. And the number of apparent surgical cases which recover under his treatment (not the expectant variety, but the therapeutically active kind, which you would report to your society as having been operated on "just in time") would astonish you.

I have talked with many surgeons. Most of them have gone into the whittling-business, because it is is "more satisfactory," as they say. Further inquiry generally elicits the reason for their unsatisfactory results, viz., total ignorance of drug-therapeutics. They were too lazy to learn! Surgery is a snap as compared with honest, successful general practice, in the country at least. We fellows in the country object to being treated as primary scholars in the medical art and made to worship King Scalpel.

Require special training in surgery as a necessity for membership in your society. That's all right. And then insist that no surgeon who has not had special training in drug-therapy under acknowledged masters of the art, and then proved his abilities in this line, shall be allowed to deal out pills "on the side." Allow none of your members who have never been engaged in general medical practice to treat, either privately or in consultation, cases that lie entirely within the domain of internal medicine, the sphere to which you wish to confine the activities of the ordinary M. D. Unite with us in keeping the professional hygienist and sanitary expert from meddling with drugs, the use of which he knows little about. And then, after we have selected the purely surgical cases from those which are entirely or partly medical, and instructed you to treat the medical part of the disorder, we'll all of us be glad to turn over to you more of our surgical cases.

This suggestion, Mr. Surgeon, is made in all kindness. You are an indispensable helper, a necessity in time of need, but you are not the "whole show." I have had some disgusting experiences with drug-ignoring doctors which I shall be glad to tell you about if you will only call at my office. And after you have heard the tales you will not wonder that I have made the suggestion to form an American College of Drug-Therapists, with the avowed object of keeping surgeons from practicing general medicine until they are fitted for it. Its members might be able to help you sometimes when you are in doubt as to how to proceed.

New England Pill Slinger.

Podunk Corner.

THE ATROPINE TEST IN MENINGEAL AND CEREBRAL CONDITIONS

The description of this interesting test is abstracted from *Sêmaine Médicale*, in which it has been described by Drs. Roch and Cottin. It depends upon the fact that in cases of bradycardia in which the slow pulse is due to stimulation of the vagi, either centrally or in the course of the nerves, an injection of atropine paralyzes the intracardiac nerve-endings of the vagi and thus causes within a short time a well-marked acceleration of the heart-beat. The dose of atropine required is very small; 1-5 milligram of atropine sulphate being sufficient to produce the desired effect, which is manifest in a quarter of an hour and attains its maximum in the course of an hour. In very obscure cases of meningitis, with slow pulse (40–50) and uncertain symptoms, which the author described, the diagnosis was established by the atropine test, by which the rate the heart-beats was accelerated to 80 or even 100 a minute.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER A. M., M. D.

THERE is one peculiarity about the daily life of the people of this country that is more marked than in other races, and that is, the high pressure at which all classes of the community appear to live. Feverish haste to amass wealth, struggles for preferment and promotion, work to retain a certain position, if not to improve that position in society, the rush after pleasureable excitement. All these combine to create impatience and unrest in the human mind. The mind soon gets into a certain groove from which it becomes impossible to extricate itself, and very soon insomnia, nervous prostration and concominant results follow, and the victim, quite conscious of his hopelessness, is compelled to take an absolute rest in order that his nervous system may regain its equilibrium.

Nature is not to be trifled with. She is certainly very patient of neglect; but of one thing we may be perfectly assured, and that is, sooner or later she will assert her rights, and with no uncertain voice. She warns us by aches and pains, and narcotics and stimulants resorted to to make us forget, until the strain can be no longer borne and there is a collapse.

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Another cause of this sudden giving way of vital forces is to be found in the never varying treadmill kind of life so many of us lead year after year—no change, nothing to relieve the dread tedium and monotony. Examples of such affronts to nature in the violation of the most simple rules are, unfortunately, only too numerous, and every doctor has patients whom, he knows, nothing but absolute rest and change of scene can cure. It is surely time that the "whip and spur" were laid aside, and that there should be a cessation of this hurry and drive.

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Prominent among the prevalent popular errors is that which regards the children of the poorer classes as superior in vitality to those of the rich, and looks upon wealth and ill-health as synonymous. Dr. Humphreys has shown that measles is ten times more fatal among chldren of the poor than among the rich families; typhoid fever five times as fatal; convulsions, thirteen times; scarlet-fever, twice, as rich and idle people live longest, and professional men next, while hard work everywhere shortens life.

When it is remembered that the homes of the poor, the factories and shops usually are unsanitary, and when it is further remembered that child labor has been a feature even of English-speaking social conditions for, at least, the last three centuries, this diminished vitality can be regarded as only a natural result.

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Americans do not enjoy the vitality which Dr. Humphreys has found among the English wealthy classes, and for obvious reasons. The Englishman usually retires from business when he has achieved a competency, or he studies science or does something akin at the same time. The American does not. The Englishman, by his rational mode of life, escapes that most devastating influence of emotional overstrain from anxiety. The same is true as to the professional classes of both countries.

Emotional and moral anesthesia, as well as the freedom from emotional overstrain, plays a large part in determining long life. Paupers and other degenerates for that reason live long, when once they have passed the great periods of stress. Goethe acknowledged this when he wrote:

. . . . The method is revealed:
Without gold or magic, or physician.
Betake thyself to yonder field,
Then hoe and dig, as they condition;
Restrain thyself, thy sense and will,
Within a narrow sphere to flourish.
With unmixed food thy body nourish;
Live with the ox, as ox, and think it not a theft
That thou manur'st the acre which thou reapest;
That, trust me, is the best mode left
Whereby for eighty years thy youth thou keepest.

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The popular opinion that long life is the test of vitality in a family is demonstrably erroneous. The average degenerate family contains one long-lived emotionally and

morally anesthetic member and several members who have died under the age of five.

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The vitality of long life as an evidence of biologic strength turns upon the environment in which the life has been led. Judged by this standard, general vitality has risen because of the general intellectual improvement, not because of an increased moral and emotional anesthesia. For this reason, men of broad culture now are found far more frequently among octogenarians, nonogenarians and centenarians than formerly, culture having fitted them to the strenuous intellectual life.

The American business man, unfortunately for himself, has the philistine notions of rural communities as regards aught but money making. English business men are prominent among scientists; but no later American business man has attempted to rival the fame of our Franklin. Scientific business men, especially if bankers, like the late Lord Avebury, would be looked upon in America as monstrosities deserving treatment in an insane hospital. Although America has had a banker-poet, in the person of Stedman (who is on the level with the English banker-poet Rogers), still, certain professors of literature in subsidized universities have held that the creative power needed in money-making must of necessity debar either scientific or literary success from crowning a financier.

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One factor determining the relative vitality is the use, or otherwise, of alcohol. According to the editorial columns of the average newspaper, even the moderate use of alcohol is destructive of vitality, but according to the advertising columns, a certain brand of whisky has been (so numerous nonogenarians and centenarians testify), the chief cause of a healthy old age. Comically enough, some statistics regarding centenarians, if analyzed, would tend at first sight to support these claims, as the proportion of occasional drunkards among the centenarians is rather larger than is that found among the ordinary population. The usual half-truth of analyzed statistics is here noticeable, since the morally, emotionally anesthetic degenerate does not display the usual degenerate intolerance of alcohol which creates so many total abstainers and alcoholophobiacs.

The influence of alcohol in the production of disease and social defects is, however, overestimated, as the use of it more frequently is a consequence than a cause, while, further, it aggravates the conditions that produced its abuse. The influence of the emotional overstrain of poverty in lessening vitality is equalled only by that of the speculative atmosphere, the great cause of conditions like paretic dementia that sap the vitality of the business man without culture.

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There is in this workaday world a large class of people who seem incapable of taking life soberly, however serious the intention. An exuberant vitality that finds no natural outlet turns to the sensational and marvelous as naturally as the toper to his cups. Mental intoxication he must have if he is debarred from physical stimulus. To such a mind, the rehearsal of a "miraculous" cure, especially when painted with the fire of religious enthusiasm, thrills through and through and drives into the background the sober thought of his better senses. A personality adroit, magnetic, and unscrupulous, by its overpowering vitality readily takes captive and enslaves these weaker minds. But this condition cannot continue indefinitely. After every debauch there is a tomorrow, and even the most trustful ones are likely to awaken to a condition of enlightenment, when circumstances drop them down hard on the bedrock of common sense.

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It is comforting to know, however, that the aggregate number of those believing in curative occultism, for instance, is far less than ever in the world's history. Where today a few thousand profess adherence to an erratic theory, in former epochs of man's intellectual development entire nations, like the Hindus of the present time, were subservient to every art which the skill of the magician or the dreams of the illuminati could suggest. True, we find in every great metropolis a few soothsayers, astrologers, and, at extremely rare intervals, an alchemist—a veritable apparition arisen from the dead.

Yet, the callow clientele which encourages such imposture is almost exclusively composed of silly women and senile men, who, under the most favorable conditions, could not by any human possibility exert the slightest influence upon the world's progress, nor affect in the remotest degree the happiness of mankind. Other, more rational, delusions of the intellect, may claim passing tolerance, even respect, but for the sibyl and astrologer of the twentieth century, compassion for fellowmen demands that we should have no mercy whatever.

Under the influence of a cathartic dose of resin of podophyllum (podophyllin), the intestinal and hepatic secretions are augmented and after a considerable time copious alvine evacuations result. The action of the drug is attained by marked peristalsis, giving rise to considerable pain and griping; which, however, may be modified by such agents as leptandrin, hyoscyamine, and atropine. When associated with other purgatives, care should be exercised to select those only which, like itself, are tardy in their action. The cathartic action of the drug is increased by common salt. Calomel and podophyllin is a very popular combination. A still better one is calomel, podophyllin, and bile-salts; which constitutes an ideal combination for the treatment of biliousness.

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Podophyllin is an active hepatic stimulant and cholagog, being peculiarly appropriate remedy in that condition known as torpor of the liver. The constipation attending hepat c cirrhosis and cancer, as well as that from any hepatic disorder, is well treated by podophyllin.

The slowness and completeness of its action, together with its property of stimulating the functional activity of the liver, renders the drug extremely serviceable in the treatment of habitual constipation from any cause.

In addition to its cathartic action, podophyllin acts as a mild diaphoretic and alterative, inducing ptyalism in some persons. In very small doses, it unquestionably stimulates the sympathetic nervous sytem, acting principally upon the parts supplied by the solar plexus.

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While podoyhyllin is used chiefly as an hepatic stimulant and to overcome constipation, it has many other important uses. Thus, in cholera infantum and summer diarrhea of children, very small doses exert a most beneficial influence. It is a valuable remedy, also, in cardialgia accompanied by constipation; in gastric catarrh; in cardiopathies when aggravated by hepatic inactivity and portal torpor; in hemorrhoids dependent upon biliary insufficiency with portal congestion; furthermore in certain renal and skin disorders, and in the forming stage of many febrile affections.

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It is astonishing how an aggressive chump can butt his way in and succeed simply on his nerve. He has to take many a hard bump, but his hide is tough and his skull is thick, so he doesn't mind. To a conservative person he is as nauseating as limburger cheese is to an Irishman, but he unquestionably gets there.

If the newly made millionaire would only be patient and not make any serious bad breaks, he could squeeze into any seat. It may be expensive, slow work, and cost him many rebuffs; but, if his patience, and especially his money, holds out, it is only a question of time.

Wealth has its drawbacks. A rich man can never be certain who are his friends. Let him experience a little reverse, and they disappear like fog at sunrise. The few who stick by him are likely to be those he valued least.

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Rotten apples are easiest to find; so worthless friendships are the easiest to form.

Lightheaded men are welcome at afternoon teas, because they never make the rest of the company feel like idiots.

Because people seem like donkeys does not signify that they actually are. Perhaps they are rich and aristocratic and don't have to display intelligence.

The less a man has in his skull the more he needs in his pockets

The spendthrift may not be a wise financier, but even if he ends in the poorhouse he will get a lot of consolation from the joy he remembers.

Any old plug can get along if he pounds away hard enough, but only the brilliant man can bat around half the night and then accomplish great things next day.

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The sallow man you see quietly taking tea and toast in a far corner of the restaurant may be a millionaire, but the hearty fellow who is shouting for terrapin and canvasback is probably scarcely earning a hundred and fifty a month.

Nothing is so depressing as remorse. Nothing is more weakening to the moral fiber than good resolutions that are likely to be broken.

The finest thing a hog can think of is a trough full of swill and some soft mud-puddle to lie in and sleep. These ambitions are easily attained and the hog enjoys itself. If you want to be happy, then cultivate thoughts like the hog.

It is a heap easier to row down stream than to pull against the current. Besides, at the end of your journey you will find that you have gone a lot farther.

The most damnable handicap a nan can struggle under is the belief that he is not as good as some other.

AMONG the BOOKS

THORINGTON: "PRISMS, AND THEIR USE"

Prisms, Their Use and Equivalents. By James Thorington, A. M., M. D., professor of diseases of the eye in the Philadelphia Polyclinic and in the College for Graduates in Medicine. With 118 illustrations, of which 18 are colored. Philadelphia: P. Blakiston's Son & Co. 1913. Price $2.00.

This book represents another addition to the growing series of manuals on refraction from the pen of Dr. Thorington, who continues to hold first place among the writers of popular books on this subject—and deservedly so, for he is, in our opinion, the clearest and most practical writer on this side the Atlantic.

We wish that we could urge upon our readers the importance (not to say the profit to themselves), of providing themselves with a set of books like these of Thorington's, together with the necessary armamentaria, and of following up this kind of work. A set of these books—"Refraction and How to Refract," "Retinoscopy," and "The Ophthalmoscope, and How to Use It," with the present one on "Prisms" now added to it—will give the practitioner practically all the information he needs for the successful carrying out of his own refraction-work. They are all simply and plainly written, and, with a very moderate degree of scientific training, the physician can readily comprehend them and translate them into practice.

BLANCHARD: "WAYSIDE EXPERIENCES"

Wayside Experiences: A Collection of plain Tales as Heard Along the Road. By C. Elton Blanchard, M. D., author of "Dr. Betterman," "Medical Dollars and Sense," etc. Newark, N. J.: The Physician's Drug News Company. 1913. Price $1.25.

Dr. Blanchard has collected in this volume some very interesting short stories, all of them about people in whom the doctor has a special interest. You meet them all in your practice. There is the young man who contracts syphilis and then marries, and pays the price in three ruined lives; there is the confession of the second wife—the nurse who loves her doctor, not wisely, but too well; the patient whom drugs could not cure and who defied the efforts of the doctor until Dr. Xury came along with an unusual (and effective) form of psychotherapy; the grass-widow, with a life-story of abuse and neglect; the story of the childless wife and how her home was made happy—and still others. We see these people, every day, and these stories of their troubles and their final triumphs (for happily Dr. Blanchard finds a silver lining in nearly every cloud) all ring true.

You will all enjoy the first story in the volume, "Dr. Jones's Farm for Down-and-Outs." On this farm, the good old physician attempts the physical and spiritual regeneration of men who have been fighting the battle of life, and who feel that the tide has turned against them. Not only does he make his charges well, through bringing them back to nature, but, what is better, he gives them hope, faith in themselves, and a sense of human brotherhood. Dr. Blanchard has embodied in this story a bit of practical idealism, which is probably "the shadow of things hoped for"—a dream that he hopes some time in the not too distant future to see realized.

Read the book! Not only will you enjoy it, but it is one that will do good, clean, medical-missionary work if placed in the hands of your patients. Incidentally it will do *you* good.

TIBBLES: "FOODS"

Foods, Their Origin, Composition, and Manufacture. By William Tibbles, LL. D., M. D. London: Bailliere Tindall, & Cox. 1912. Price $4.50.

Considering the immense part that diet plays in maintaining the health of the human body, and even of the mind, and in view of the tremendous strides that have recently been made in the chemistry of food-stuffs and of body metabolism, it is strange that dietetics, as a science and an art, should lag so lamentably behind the procession. That

it does lag behind, no one, we think, will seriously question.

The defect, however, is almost wholly on the side of practice. A great deal of excellent work has been done and literature published in the exposition of dietetics. But the practitioner does not seem to have realized the importance of an exact knowledge of the subject; so that medical men, who are giving their patients all the advantages of modern research and progress so far as therapy and surgery are concerned, are still pursuing the old happy-go-lucky course of a century ago in the matter of dietetics.

The book under review calls for neither criticism nor justification; it speaks for itself. Be it our part to urge upon our readers the importance—nay, the crying necessity—of possessing themselves of a copy, and to make its contents an integral, practical part of their day-to-day work.

CHOYCE AND BEATTIE: "SYSTEM OF SURGERY"

A System of Surgery. Edited by C. G. Choyce, B. Sc., M. D., dean of the London School of Clinical Medicine, and J. Martin Beattie, M. A., M. D., professor of pathology and bacteriology at the University of Sheffield. In 3 volumes. New York: The Funk and Wagnalls Company. 1912. Price, per volume, $7.00.

Years ago it was the custom for medicine as well as for surgery to maintain in its literature a goodly supply of short, comprehensive textbooks or manuals that covered the entire subject, in a concise, summary fashion, for the use of the general practitioner. We have always regarded such books as most excellent things—as being, indeed, the birthright of the practicing physician. In internal medicine, the custom never was abandoned, but persists in its continuity to this day; in surgery, on the other hand, it gave way almost wholly to the publication of large and exhaustive works on the various surgical specialties and of equally voluminous encyclopedic "systems."

We are glad, indeed, to see the olden way revived in the work now before us. We do not overlook the fact that even this present undertaking extends itself into three volumes; nevertheless, having regard to the present-day scope of the subject, one can hardly look upon three moderate-sized volumes as anything but a small work. And, then, the essential thing about it is, that it is comprehensive, and practical, furnishing the general practitioner wirh real help; enabling him to do his own surgical work instead of exploiting elaborate surgical specialties and specialists, and is adequate to all his ordinary needs in this line. We gladly welcome it and cordially commend it.

CAMPBELL AND KERR: "SURGICAL DISEASES OF CHILDREN"

The Surgical Diseases of Children. By William Francis Campbell, A. B., M. D., professor of anatomy at the Long Island College Hospital, and LeGrand Kerr, M. D., attending pediatrist to the Methodist Episcopal, Williamsburg, Bushwick, and Swedish hospitals. New York and London: D. Appleton & Co. 1912. Price $6.00.

Any piece of literature on pediatrics to which LeGrand Kerr's name is appended commands attention and respect, and is sure to repay the time and care spent upon its perusal. So it is that we approach this new book in a favorable attitude of mind from the outset, which is greatly enhanced by the quite novel angle from which the joint authors themselves approach their subject.

Hitherto there has been no yielding of the rigid dividing line between the purely medical aspect of pediatrics and plastic, corrective surgery, between diseases of children and orthopedics. Yet, it must be well recognized that between these two there lies a large and important field of general surgical pathology and treatment peculiar to the anatomy and function of the child, one that has not heretofore been accorded its proper exploitation. It is this task that Drs. Kerr and Campbell have set themselves, and they have acquitted themselves excellently.

The work must be regarded, of course, largely as a tentative breaking of new ground. But, even so, it is a pretty complete piece of work and covers the ground with praiseworthy thoroughness. The family physician (to whom, by the way, it is dedicated), will find it especially helpful and instructive.

DeLEE: "OBSTETRICS"

Principles and Practice of Obstetrics. By Joseph B. DeLee, A. M., M. D., professor of obstetrics at the Northwestern University Medical School; obstetrician to the Chicago Lying-In Hospital and Dispensary, and to Wesley and Mercy hospitals; consulting obstetrician to Cook County and Provident hospitals. With 913 illustrations, 150 of them in colors. Philadelphia and London:

The W. B. Saunders Company. 1913. Price $9.50.

When Dr. DeLee published his "Obstetrics for Nurses" a few years ago, we wondered—and expressed our surprise in a letter of congratulation to the author—that he did not extend the title to include the practitioner of medicine, since it seemed to us that the book was fully adequate for the needs of the physician. Now we see why he did not do this: he was reserving for the physician this yet more excellent presentation of the subject. This work was well worth the waiting. We do not believe that either this country or Europe has anything more complete or more classical in the way of a textbook of obstetrics—it might well be called The New Obstetrics.

The author himself, as everyone who knows him is aware, has been one of the most active and intelligent frontiersmen on the advance-line of modern, scientific obstetrics; and his book embodies all that he has achieved in this direction, and all that progressive men elsewhere have contributed to the perfection of the art.

The division of the work into its four fundamental phases, namely, the physiology, conduct, pathology, and surgery of obstetrics, is a most happy and illuminative arrangement. The entire book, in its every feature, touches the high-water mark. The author's half-apology for avoiding polemic discussion "at the risk, perhaps, of being too dogmatic" is quite unnecessary. Such an attitude is altogether in accord with the spirit and need of the times.

HERMAN AND MAXWELL: "DISEASES OF WOMEN"

Diseases of Women. A Clinical Guide fo Their Diagnosis and Treatment. By George Ernest Herman, M. D., consulting obstetric physician to the London Hospital. Enlarged edition, revised by the author, assisted by R. Drummond Maxwell, M. D., assistant obstetric physician to the London Hospital. With 8 colored plates and 292 figures in the text. New York: The Funk and Wagnalls Company. 1913. Price $7.50.

In this second edition of his work, the author, as he himself announces in the preface, has changed the motif and purpose from a specific to a generic charaeter. In the former editions, as he says, he set forth the methods of operating which he himself had practiced and found good. In this edition, he has attempted to reflect the acts and opinions of the gynecological world at large, to which task he confesses he was obliged to call the aid of a younger man who was in a position to watch the practice of many different operators.

We cannot help feeling that herein the author has ıade a lamentable mistake. As a specific contribution of his own personal experience, his book had a value that was correspondingly specific and determinate. As a general textbook of gynecology, it must be comfessed, it dissipates its individual strength, and fails in competition with other and better works of this broader character.

We think it a great pity that Dr. Herman was seized with such a spirit of diffidence and self-depreciation. The medical world would have welcomed with a good deal more enthusiasm an edition of the book which, instead of dispersing the individual element, had intensified and strengthened it. All of which, however, does not imply that the work, in its present shape, has no intrinsic merit. It is, when all is said and done, a painstaking, practical, up-to-date presentation of the subject.

BOOKS RECEIVED

Die Klinik der Tuberkulose. Handbuch der Gesamten Tuberkulose für Aerzte und Studierende. Von Dr. B. Bandelier und Dr. O. Roepke. Zweite vermehrte und verbesserte Auflage. Würzburg: Curt Kabitzsch. 1921. Price Mk. 15.00.

Lehrbuch der Spezifischen Diagnostik und Therapie der Tuberkulose. Für Aerzte und Studierende. Von Dr. Bandelier und Dr. Roepke. Mit 19 Temperaturkurven auf 5 lithographischen Tafeln, 1 farb. Lith. tafel und 5 Textabbildungen. Sechste vermehrte und verbesserte Auflage. Würzburg: Curt Kabitzsch. 1911. Price Mk. 7.80.

Tuberculin Treatment. (Oxford Medical Publications.) By Clive Riviere, M. D., F. R. C. P., and Egbert Morland, M. B., B. Sc., M. D. New York: Oxford University Press. 1912. Price $2.00.

Consumption in General Practice. (Oxford Medical Publications.) By H. Hyslop Thomson, M. D., D. P. H. New York: Oxford University Press. 1912. Price $5.50.

Rational Organotherapy; with Reference to Urosemiology. By Dr. A. von Poehl, Dr. Prince J. von Tarchanoff, Dr. Alf. von Poehl, and Dr. P. Wachs. Translated from the Russian text. Volume I. London: J. & A. Churchill. 1906. Price sh. 7/6 net.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERIES

ANSWER TO QUERY 5908.—"Tinea Circinata." Your correspondent T. D. F., in the May number of THE CLINIC (p. 461) writes of the poor success he has had with the usual remedies in the treatment of tinea circinata, or ringworm. Here is a simple remedy with which I became acquainted during my childhood. At that time such a ringworm made its appearance on the side of my face and it resisted all the usual remedies. Finally a good old granny helped me. She burned a small wad of linen rags on the side of an ax, then blew off the resulting ash, when there remained a spot of moisture, which she called the "sweat of steel." This moisture was applied to the ringworm, making, of course, a dark-colored smudge. This was left on for the day, when it was washed off. Sometimes a second application may be required, but it will do the trick. I have seen this treatment tried several times and never have seen it fail of effecting a cure.

G. D. S.

Stonington, Conn.

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ANSWER TO QUERY 5917.—"Diagnosis of Variola." With regard to question No. 1, as to whether there are any positive signs or indications that aid early in discriminating accurately, positively the discrete form from chicken-pox of an aggravated type, I wish to offer a few suggestions. The intense backache, headache, and the severe chill preceding the eruption of variola is sufficient to dispel any doubt as to its being the forewarning of an invasion of that disease, rather than that of chicken-pox. The chill just preceding the eruptions of variola is something long to be remembered. (I have been there!)

The prodromes accompanying the manifestations of the two diseases are as different as chalk is from cheese. The very marked rise in the temperature immediately following the chill, or succession of chills, characterizing the invasion of variola is so much more pronounced than in chicken-pox (where chills practically are absent) as to leave no room for doubt as to the true nature of the disease in question. Immediately after a patient has had one of those severe chills, with the accompanying intense headache and backache and before any pustules or an eruption have appeared on the surface, if the physician will pass his fingers gently over the patient's face and chin, he will detect the presence there of what feels like numerous birdshot just under the skin—particularly about the chin. I have always found this characteristic sign. When the pustules appear on the surface and finally become vesicular, their invariable umbilicated appearance is sufficient to distinguish the vesicles from those of chicken-pox, which never present that appearance.

Question 2. "Does the discrete form protect or immunize a person from the malignant smallpox? I think it does in ninety-nine percent of cases. I had one case of the malignant form, or "black" smallpox, as it was termed, that proved fatal, where the patient was nursed by a man who had had varioloid many years before; and he proved to be immune from a second attack.

I recall one case of varioloid in which there was no visible eruption. The prodromes were so characteristic of variola that I told the patient that, if he had any pustules or vesicles, I should pronounce it varioloid. In due time, however, three other members of his family were stricken with the disease, two of the cases being of the confluent variety, the third of a milder type. Subsequently I examined the man who had varioloid symptoms, finding two pox-marks on his back.

In this connection, I will state that the prophylactic value of vaccination has proven,

in my practice, to be of inestimable value. I will mention one case, where one member of a family of seven (father and mother and five children of school-age) came down with the confluent smallpox. The parents had been vaccinated years before, but none of the children had been. The premises did not admit of segregating the well from the sick one. I vaccinated them all-around, repeating this daily until I was sure that the vaccine had taken. This procedure forestalled its further outbreak in the family. There was an interesting climax to this case, which with your permission I will here relate.

It was a case in which the victim was cared for by me at the request of the civil authorities of the town. As there was only one case in the family of seven, the town-fathers doubted my diagnosis and refused to pay my bill. I abided my time, and when my patient had fully recovered and had been "duly and truly prepared," I presented him before the aldermen at their regular session. They did not suspect that the lad accompanying me was the patient in question. When the opportunity afforded, I had the boy stripped as naked as he was born, and, as it was a cold, raw day in February, he showed up beautifully. "There, gentlemen, is the patient," said I. They took one look, then exclaimed with one accord: "For God's sake, doctor, take that young'un out of here—we will pay your bill." The bill was paid, but I charged five dollars extra for my extra trouble, and this they paid without a demur.

GEORGE D. STANTON.

Stonington, Conn.

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ANSWER TO QUERY 5924.—"Hydrocephalus." A. P. Freund, Victoria, B. C., writes us that he recalls reading about the method of treating hydrocephalus, such as was referred to in this query. The treatment consisted in exposing the lower part of the back of the head to the sun's rays for long periods, the remainder of the body being protected. Can anyone else give us any further information upon this subject?

QUERIES

QUERY 5925.—"Catarrhal Gastritis, Ulcus Gastrica, etc." S. D. D., Pennsylvania, writes: "Please name some preparations that have done good work in gastric catarrh, catarrhal conditions of stomach, ulcers in stomach, etc. Are saline laxatives desirable in these conditions?"

The terms "gastric catarrh and "ulcer of the stomach" cover a vast variety of conditions, and cannot be considered offhand, in bulk. The success of the positive therapeutist, it should be remembered, is owing to the fact that he recognizes the pathological conditions present in the individual and administers the indicated remedies therefor in small repeated doses to effect.

In catarrhal conditions of the gastric mucosa, juglandoid, hydrastoid, eupurpuroid, and hamameloid are of value. Frequently indicated for the accompanying indigestion are: betaine-pepsin (betaine hydrochloride, grs. 2; pepsin, gr. 1; papain, gr. 1-2); and, also, such combinations of papain and pepsin as (1) papain, gr, 1; pepsin, gr. 1; berberine hydrochloride, gr. 1-32; strychnine sulphate, gr. 1-128; or (2) papain, gr. 1-3; charcoal, gr. 1; sodium bicarbonate, gr. 2-3; or (3) pancreatin, gr. 1-2; papain, gr. 1-2; diastase, gr. 1-2; bilein, gr. 1-32; strychnine sulphate, gr. 1-128; ginger, gr. 1-4; charcoal, grs. 2 1-2; sodium bicarbonate, gr. 1.

A good preparation of calendula has given excellent results in this writer's practice, and proper dieting, lavage, massage, and the sinusoidal current usually are beneficial.

In order to secure definite results, it is desirable, as a rule, to give the patient an Ewald or Boas test meal, and have the stomach contents withdrawn one hour later and examined by a competent pathologist.

In gastric ulcer, pain is most apparent after ingestion of food. Frequently there is blood in the vomitus. Examination of stomach contents is essential if the diagnosis is uncertain. Lavage, rest in bed, rectal feeding in fever cases, condurangin, and chelidonoid, with silver oxide as alternants to heal the ulcer and improve the tone of the mucosa. Hydrastoid may be added, 1-3 of a grain, every three hours. A resorcinated aqueous preparation of calendula is useful. Bismuth and cerium oxalate compound, bismuth subgallate, hamameloid, creosote carbonate (cautiously) also are useful remedial agents. Arsenous acid may be given in the early stages. Hyoscine, morphine and cactoid, cannaboid, codeine or hyoscyamine for anodyne effect.

Hyperacidity must, of course, be controlled, and digestion, of such food as is allowed, assured by the use of indicated digestants. Lavage with a solution of methylene-blue, 1 : 1000, and isarol, 2 or 3 minims, in cinnamon-water, internally, every three hours, is excellent treatment in robust or ambulant patients. Galactenzyme, two to four tablets with food, is helpful. Coli-bacterin, every two or four days. Surgical procedure often is necessary.

Laxative salines may be given advantageously in some cases. They are not desirable, as a rule, however, if ulcer is definitely known to exist; under such circumstances, the withholding of food for at least forty-eight hours is essential; the strength of the patient being maintained by nutrient enemata.

In acute gastric catarrh, the intestinal canal should be emptied and the stomach put at rest by the abstinence from food until the inflammatory condition has subsided.

In the chronic condition, we usually have to deal with a reduction of hydrochloric acid and ferments, the accumulation of mucus, and a deficiency of motility. As we have already pointed out, the presence or absence of hydrochloric acid must be definitely determined.

Give us a clearer idea of conditions present in any particular case, and we shall be much pleased to aid you to the extent of our ability.

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QUERY 5926.—"Perhaps He Drinks Bromo-Seltzer to Excess?" C. M. B., Missouri, submits this poser: "What would kill this man? Age, 42 years; weight, 245 pounds, weighed 121 pounds when he was 20 years old. Has taken bromo-seltzer for twenty-eight years, often as many as fifteen small bottles in one day, frequently three 25-cent bottles a day. Would buy it by the gross. Smoked 40 cigars per day, and drank 2 quarts of whisky. Has cut down the cigars and whisky, but still takes the bromo-seltzer. Pulse, about 90, regular; looks the picture of health. Takes the 'bromo' for headache."

We should be inclined to think that despite the appearance of "perfect health," your patient will succeed in killing himself if he persists in his consumption of bromo-seltzer. This certainly is one of the most remarkable cases we have heard of, and it would be interesting to know whether the man smokes the 40 cigars to overcome the effects of the bromo-seltzer, or takes the bromo-seltzer as an antidote for the nicotine poisoning.

His headache probably is due to autotoxemia. If the man is really desirous of getting rid of the bromo-seltzer, whisky, and tobacco habits, we should place him in charge of a thoroughly reliable, firm nurse; cause thorough elimination; and push avenine and passiflora, with nuclein and lecithin.

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QUERY 5927.—"Pellagra. Indurations in Mammæ." L. W., Texas, wishes to be referred to journals or books containing articles on pellagra. He has a patient who, he thinks, has pellagra. The subject is a woman about 33 years of age. About a year ago last spring she had a "redness and soreness" on the backs of her hands. This was treated by another physician, and it finally disappeared.

"This spring the hand trouble reappeared, and with it more pronounced symptoms. She had pains all over her body, looseness of the bowels, great debility and nervousness; the pulse is weak. The mucous membranes look pallid. There was some congestion of the throat when the patient was first seen. The mouth has not been sore yet, though she has since then complained of a stiffness of the tongue. On some days she complains of her hands hurting her when they hang down, and this is less pronounced on some days than on others. She has no appetite, but manages to take some food each day. The urine at first was very deficient, not more than 60 ounces in twenty-four hours, but by drinking more fluid (she had been taking but little before), it has been brought up to something like normal.

"She has received bismuth subgallate for the diarrhea and sodium sulphate for the intestinal putrefaction; triple arsenates and cactoid, to steady the pulse and act as a reconstructant. Dr. Bowling's method of treatment with castor oil and chlorine-water and calcium sulphide will be tried.

"Next: What should be the normal condition of the mammary gland in a woman 46 years of age? In a woman examined lately, the milk-ducts appeared hard and somewhat bunched together, but there was no "lump." She has not passed the menopause and is still menstruating—sometimes too much so. No evidences of carcinoma are found.

"What drug best checks uterine bleeding or too profuse menstruation? Hydrastinine is too expensive to use much."

The article by Mizell, on the treatment of pellagra, which appeared in CLINICAL MEDICINE for November, 1911; and the editorial, page 821, August issue, 1911, are the most important contributions on the subject which have yet appeared in current literature. Other articles which have appeared are:

"The Treatment of Pellagra," by Dr. E. H. Bowling, CLINICAL MEDICINE, November, 1911; "The Diagnosis and Treatment of Pellagra," by J. W. Torbett, CLINICAL MEDICINE, December, 1910; and "The Treatment of Pellagra," by Dr. J. E. Knight, CLINICAL by Dietetic Treatment," by Dr. C. S. Pixley, MEDICINE, August, 1912, and "Pellagra Cured June, 1913.

The pathology of pellagra, as hardly need be stated, is not yet thoroughly understood, and it is, therefore, difficult to outline a treatment which would prove effective in all cases, though the saturation of the patient with calcium sulphide and the exhibition of the sulphocarbolates and nucleinated phosphates in large doses have been strongly recommended. Several Georgia physicians have had excellent results from the use of gelsemium.

You might advantageously write to Surgeon-General Blue, Public Health Service, Washington, D. C., for literature on the subject. We would also refer you to the numerous articles by C. H. Lavinder which have appeared in the *Bulletin of the Public Health and Marine Hospital Service*, also to articles by Dr. C. S. Pixley in *The Charlotte Medical Journal*.

We trust you will keep careful clinical notes and report your experience with the patient now under observation.

The condition of the mammæ in women of middle age varies materially, but any hardness or "bunching" is suspicious. Cancer frequently appears as the outcome of changes in tumors, theretofore benign.

As you know, in most cases the cancer springs from the epithelium lining the acini or the epithelium lining the ducts, progressing by general infiltration. Scirrhus cancer, especially growing slowly (frequently not becoming obvious for two or three years), appears usually after middle life. Frequently pain of lancinating or shooting character first attracts the woman's attention to the part, though she may have been aware for some time that a "lump" existed in her breast. Such "lumps" always must be regarded with suspicion, no matter what the age of the patient; and the physician must not be misled if the indurated area is found in the detached portion of the gland lying high toward the axilla.

A cancer small and deeply placed is always fixed; it is not encapsulated; therefore cannot be moved about. It may not be felt by the examining hand lifting the breast in front, and therefore the doctor should stand behind the sitting patient and, with his hand over her shoulder, should, under his fingers, roll the breast flattened against the chest, when frequently he will detect an infiltrating mass otherwise unobservable.

Axillary nodes should always be sought for. The doctor should sit before the patient (whose arms should be raised), his fingers being pressed high into the axilla and palm of hand against chest.

A positive diagnosis can be made only upon the evidence of tumor, pain, and involvement of lymph-nodes. Bear in mind that the characteristic cachexia appears late.

In this connection, we reproduce for your information our answer to a recent letter received from a physician who desired information relative to the importance of "lumps" in the breast.

"The character of the 'lump in breasts' must, of course, be ascertained. If you will give us a clear idea of their character, location, length of time they have been present, we may be able to make some definite therapeutic suggestions. Are the indurations freely movable or is overlying skin adherent? What is the general condition of the patient? Has she borne children?"

"Phytolaccoid and irisoid are perhaps the most useful and generally indicated remedies, with calx iodata or arsenic iodide as alternates.

"Many new growths are to be found in the breast—some of them benign; some of them doubtful; some of them truly malignant. Fibroma is common, but it is not always easy to differentiate in the early stages from sarcoma; as a matter of fact, fibromata, myxomata, and sarcomata are closely allied.

"Periductal fibromata of the breast are encapsulated tumors, which may vary in size from a bean to a coconut. Are most commonly found in women between twenty and thirty. They are painless, grow slowly; and are usually found in the upper outer quadrant of the breast.

"Myxomata differ little in structure from fibromata, but are likely to be larger; are observed more frequently in women of middle age; frequently contain cavities.

"Sarcoma (periductal) is most common in women over forty years who have borne children. The tumors become hard and large, involving the whole breast; they ulcerate, and the overlying skin is reddened and traversed by dilated veins.

"Fibrous adenomata are found in young single women, usually. They are lobular, quite hard and movable, varying in size from

a walnut to an orange. They grow slowly and cause no pain.

"Retention-cysts, tuberculous nodules or mastitis may cause the appearance of 'hard lumps.' It must not be forgotten that the first sign of cancer is frequently a painless lump, usually located near the nipple, but occasionally lying high up toward the axilla; deeply seated small cancers are fixed, cannot be moved. As the disease advances, the skin becomes adherent and pitted, the nipple retracts frequently, and about this time ulceration is likely to occur, and enlarged nodes in the axilla become apparent.

"It is essential that malignant growths of the breast be recognized early; the only effective treatment is radical operation."

Atropine and hydrastinine hydrochloride most effectively control uterine hemorrhages. Give atropine, to control the condition, then follow with hydrastinine, with, perhaps, stypticin as alternate, to maintain the effect. In every case, of course, the cause must be discovered, and removed as rapidly as possible.

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QUERY 5928.—"Camphor-Chloral and Phenol Combinations." D. I. S., Ohio, desires practical directions for compounding the following combinations:

No. 1. Phenol and camphor, combined, of course, to prevent the caustic effect of the carbolic acid. [Carbolic acid, better "phenol," should never be referred to as an "acid," for it is not such.—ED.] No. 2. Chloral hydrate and camphor. No. 3. Oil of mustard, chloral hydrate, and lanolin, combined to prevent the oil of mustard from blistering.

Equal parts of phenol and of camphor (or 2 parts of camphor) should be rubbed together in a mortar. The resultant liquid may be used "pure," even on extensive wounds, or it may be reduced by the addition of petrolatum or some bland oil. We prefer to use the full-strength mixture.

Other combinations of crystalline substances liquefying with camphor are as follows: Triturate together equal parts of (1) camphor and chloral hydrate, (2) camphor and menthol, (3) camphor and thymol, or (4) 2 parts of camphor and 1 part of beta-naphthol, or (5) 2 parts of camphor and 3 parts of salol. Chloral hydrate is soluble in oils, fats, and glycerin. It is well to remember that camphor may be reduced to a powder by rubbing it up with a few drops of alcohol.

For the sinapis prescription, we suggest to combine (in a warm mortar dipped in hot water and wiped) chloral hydrate and menthol, 1-2 to 1 dram of each, then gradually incorporate 1 ounce of lanolin, lastly adding 5 to 10 drops of oil of mustard. You will have to feel your way with this formula.

QUERY 5929.—V. S. B., Connecticut, has under his care a woman 71 years of age whose perineum is torn nearly to the sphincter ani. She has had attacks of uterine bleeding at intervals during the last eight months, these increasing somewhat in frequency and amount. Besides this metrorrhagia, she has a constant foul-smelling yellowish vaginal discharge resembling pus. "The cavity of the uterus," our correspondent continues, "is about 3-4 of an inch longer than normal, and the endometrium is soft and bleeds profusely at the slightest touch. No tumor can be discovered, but the patient is a fleshy woman and, consequently, difficult to examine. Her tongue has been heavily coated since she has come under observation, but it is not nearly as foul now as at first. The patient also has a spasmodic cough of twenty years' standing, which resists all medical treatment. She thinks this cough is the cause of her hemorrhages, as any violent effort renews the trouble. Her temperature in the afternoon has ranged from 99.5° to 101° F.; the pulse, from 80 to 100."

Our correspondent suspects cancer of the uterus and asks for treatment.

We are inclined to think that surgical procedures alone will prove effective here; it is just possible that you have a malignant condition to deal with. A specimen of the vaginal discharge, by all means, should be sent to a laboratory pathologist. It would also be well to secure a small portion of the endometrium and forward it at the same time.

You can probably control the cough by pushing calx iodata; and, guaiacol carbonate with lactucarium compound, or collinsonoid, as alternates, in 1-6-grain doses.

Pending the report on the specimens, we suggest that you cleanse the vaginal canal with copious hot alkaline antiseptic douches, then (with a swab) apply to the cervix a mixture of iodine, carbolic acid, and boroglyceride. A good formula for this is: iodine, 30 grains; phenol, 1 dram; boroglyceride, 2 drams; glycerin, 4 ounces. Or you may use carbenzol, diluted with equal parts of olive oil and liquid petrolatum. Churchill's solution may then be applied to the endometrium.

It is essential, of course, to differentiate between senile endometritis and cancer of the uterus. In the former condition, the

discharge continues indefinitely, unless radical measures are instituted. Such treatment consists in dilation of the uterus and removal of the entire endometrium with a sharp curette. After the cavity has been curetted, the denuded surface is cauterized with pure carbolic acid, care being taken to protect the vagina by packing gauze around the cervix. The uterus should then be irrigated with an alkaline solution. This writer is in the habit of first neutralizing the phenol with alcohol before irrigating.

It is necessary, of course, to secure thorough elimination and to improve nutrition.

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QUERY 5930.—"Bust Developers, Flesh Builders, etc." L. D. N., Kentucky, requests us to "give in full the treatments described in the usual advertisements as 'bust developers,' 'flesh builders,' 'depilatories,' etc." He has patients who demand that "the doctor do something or acknowledge his inferiority to the quacks."

Superfluous hair is easily removed, of course, by the use of a good depilatory, but such preparations can only destroy the free hair itself. Any chemical potent enough to destroy the hair-bulb must injure the skin and irreparably damage the surrounding tissues. However, the standard depilatory powder, if used as directed, will destroy the hair and the subsequent growth will be less vigorous; hence, in most of cases, after a time a lanugo-like growth alone persists.

It must be borne in mind, though, that hair growing in abnormal locations is more readily destroyed than unusually luxuriantly growing hair in normal areas. For instance, long dark hair upon the lip and chin of women can be destroyed permanently only by electrolysis.

Bust development may be secured by the ingestion of fat-forming foods; massage of the glands; inunctions, as with lanolin and coconut oil; and graduated exercise designed to develop the surrounding muscles. The use of the vacuum-apparatus is not advisable.

We cannot express a definite opinion relative the efficacy of the "flesh-forming" preparation named. It is a very certain fact, however, that some people will remain thin, no matter how "fattening" their diet may be. The only rational procedure is to study carefully the individual, correct the underlying disorders of the body-chemistry, regulate the diet, and insure nutrition. Most thin people are autotoxemic; this condition corrected, place them upon a well-balanced ration, and their weight usually will increase. Naturally, if the skin is kept active and the muscles exercised (normally or by massage or vibration), poorly developed parts will fill out.

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QUERY 5931.—"Hyperacidity and Nephrolithiasis." P. H. P., Ohio, forwards a specimen of urine from a married female, age thirty-three, and asks for diagnosis and treatment. The patient had typhoid fever ten years ago, recovery from which was complete, and she enjoyed good health. Of late, she was seized with cramps across the region of the bladder and groins. The pain was so severe that perspiration broke out, and it lasted about four hours, then gradually abated, leaving the patient very weak for two or three days. The urine that is forwarded was voided the morning following the attack. The kidneys are not very active; there is some little tenderness over the stomach, possibly from the pain; the bowels seem normal; she is now able to sit up and seems to be convalescing nicely. This is the third attack, one occurring about six weeks ago and the first one several months ago. No blood appeared in the urine before; this last attack being much more severe than others.

Your patient suffers from marked hyperacidity, very many uric-acid crystals being present in the specimen of urine submitted.

Unfortunately we do not know the total amount of urine voided in twenty-four hours, and therefore are unable to estimate the total output of solids and urea. It is impossible, of course, for us to venture a definite opinion as to the presence of calculi, or their location, should they exist, but it is more than probable that the attacks described were caused by the passage of concretions through the ureter, and calculi may be present in the renal pelvis.

Bransford Lewis, of St. Louis, in the April number of *The American Journal of Surgery*, describes three cases of multiple stones in the kidney, with a symptomatology of from thirteen to thirty years. He says: "Put no faith in symptoms, but trust in reliable returns given by searching physical examination, including the modern methods of internal inspection and investigation. In each of these cases, all the medical talent available was utilized in consultations and treatment, but to no purpose. It was always opinion and treatments, but never a diagnosis." The x-ray revealed the presence of nearly a dozen calculi in each patient, and after nephrectomy the patients recovered, subsequently enjoying better health than they had for years.

Try arbutin, and calcium and lithium carbonates in full doses and a laxative saline draught each morning upon rising.

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The Cure of Tetanus

ONE after another the maladies formerly considered incurable give way to the attacks of science. Modern investigating methods, modern means of meeting conditions, modern knowledge, and the consequent lifting of the cloud of superstitious cowardice that enveloped our fathers, have wiped many of these diseases from the list of the hopeless and unamenable. Nobody can doubt that the other as yet unsolved problems will in time cease to be such; there is—must be—a remedy for cancer, a direct means of combating the tubercle bacillus, a cure for leprosy.

Among these formidable maladies none is more to be dreaded than tetanus. Its incidence after apparently trifling wounds, the frequency with which it attacks little children, the frightful suffering it entails, but without that blessed mental derangement that assauges so many other agonies, render "lockjaw" a name of dread.

There is in that modern Eden, southern California, a fertile plot of ground that is closely fenced and placarded with warnings that no child shall gather blossoms therein, no man plunge spade into the rich mold. This is a place accursed, to be shunned by man and beast, for the soil is impregnated with tetanus bacilli, and every man who has attempted to cultivate it has died. The first trifling scratch or abrasion, and he is doomed.

Violent maladies seem to call for violent remedies, and whenever an agent of unusual power develops, it is sure to be utilized in the treatment of tetanus. The usual result follows—the lack of concerted effort, of scientific method, prevents a really exhaustive test being made; and here also the sea is littered with therapeutic derelicts, useless to all and a menace to the navigator. When the medical profession ceases to be a mob and becomes an organized and disciplined army, then we may no longer have so much rubbish to encumber us in the shape of remedies or measures proposed, but neither proved nor disproved.

The tale of the old slave who was given an ounce of quinine by mistake—and was cured of tetanus incidentally—was responsible for at least one experiment on this writer's part; and the only noticeable effect was an aggravation of the suffering, if that were possible.

Pilocarpine has been applied, with asserted success, but also without success by others—it has not really been tried out.

High hopes were excited by the success following the early trials of Baccelli's method, the hypodermic application of phenol, and for a time it appeared that the problem was solved. But the subsequent reports were less favorable, and at last we were driven to the conclusion that tetanus in Italy must be of a much less formidable type than it presents in other parts of the world.

When first introduced the antitetanic serum was scarcely a decided success. If given after the characteristic tetanic symptoms had developed it usually failed. Better results followed when the remedy was given very early, although even then the mortality was not greatly reduced. There was, how-

ever, ample evidence to show its prophylactic value, and its best field has been and still is for the prevention of the disease in persons who have been exposed to infection from injury and wounds of the skin. The best surgeons now use it almost as a routine measure with all such suspicious lesions.

Even more promising is the newer product, the tetanus antitoxin; the bulk of this remedy has been reduced by the elimination of the blood-serum and the solution of the antitoxic globulins in salt solution. In this form it is much more easy to give the larger doses that clinicians are now finding necessary. Park, of the Research Laboratories of the New York City Department of Health, urges the use of 20,000 units at the appearance of the least suspicious sign, and as much as 250,000 units have been given in a single case, and with good results. Park also advises the intravenous administration of the antitoxin, and there is no doubt that thus employed the percentage of cures is increased. The greatest field for tetanus antitoxin, however, remains in the field of prophylaxis.

How shall we control the agonizing convulsive symptoms of tetanus? Do not forget the remarkable power of the combinations of morphine and hyoscine. Some years ago Stafford, after one interesting experience in H. O. Walker's clinic in Detroit, showed that these not only controlled the spasms but apparently increased the probabilities of recovery. They should be given a more general trial.

You want to quit a-layin-down
  An' sayin' hope is over
Because the fields are bare an' brown
  Where once we lived in clover.
When jolted from the water cart
  It's painful to be hittin'
The earth; but make another start.
  Cheer up, an' quit your quittin'.

—Washington Star.

HOW CAN I INCREASE MY INCOME?

In an editorial in the last number of CLINICAL MEDICINE, under the head, "Let Us Get Right Down to Business," we announced our intention of publishing a series of articles upon the topic, "How Can I Increase My Income?"

Next month we shall announce the articles already promised, with the names of their authors. We expect to make this the most important series dealing with the financial side of the doctor's career that has ever been published. We shall probably begin it in our November issue.

No doubt you have many warm professional friends who will want to read these articles. Why not do them a good turn by a word of explanation and persuading them to subscribe? Of course you will attend to your own renewal promptly.

BE MERCIFUL TO YOUR PATIENT

Whatever may be the ultimate signification of Crile's anoci-association doctrine, in its relation to surgical shock, it has at least served one exceedingly useful and practical purpose. It has called widespread—and let us hope, fruitful—attention to the esthetic and suggestive element in our dealings with our patients, especially in the domain of surgery. For years we have inexcusably neglected this factor. We have made the avenues of their approach to us, and the *entourage* of their experience with us, almost brutally shocking to their sensibilities—deliberately designed, it would seem, to emphasize the gravity of the occasion and to give the susceptible patient the impression of being ushered into some awful and mysterious ordeal.

In the case of a patient entering the hospital and preparing for a serious surgical operation, not only are no particular pains taken to shield him or her from the sight and sound and sense of all the dreadful, sickening paraphernalia of surgery, but, on the contrary, there seems to be a special conspiracy to parade it all before the victim's shrinking eyes and ears.

Thus, white-gowned nurses flit to and fro, in and out, carrying with them the atmosphere of sickness and emergency; uniformed internes make business-like visits, with the frankly avowed purpose of "getting the patient ready;" one hears the ominous rattle of instruments and smells sickly fumes of the anesthetic; not infrequently one catches sight of some other victim being wheeled to or from the operating-room; attendants carelessly discuss, in the patient's hearing, the details of other operations—commonplace enough to them, but unspeakably grewsome to the tremulous, sensitive mind of one who is awaiting a similar ordeal. In short, the whole atmosphere is charged with the awe of what is impending; there is a veritable procession of horrors. All of which may be flattering to the vanity and affectation of those who display it, but from the patient's viewpoint it is a piece of professionalism not far removed from quackery, and certainly not calculated to inspire confidence or conserve vitality.

There is no excuse, in these days, for such a brutal neglect of the psychologic demands of the case. All the healing-cults, which we profess to despise—Christian Science, mental healing, new-thought, and the like—have learned the lesson and put it into practice; perhaps have overdone it a little. Regular medicine alone remains heedless. Possibly its attitude has not been one of deliberate disregard, as of thoughtlessness. "Evil is wrought from want of thought more than from want of heart." It has been disposed to look upon this aspect of the thing as a trivial matter.

In view of the serious business upon which these patients come to us, forgetting that these folks are in just the condition of mind and body to be easily influenced and depressed by trivial things, Crile has given the lie to its apparent triviality, and established the importance of the psychic element upon a purely scientific and materialistic—one had almost said, a cold-blooded—basis. And in this, if in nothing else, his doctrines and experimentations have justified themselves.

There is a limit to such psychology, of course. Extremes are always irrational. No one wishes that the attitude and behavior of the surgeon and his corps of accessories, before and after the fact, should be one of irresponsible and frivolous trifling, as though there were nothing serious afoot at all. Such a course would be just as hysterical and irritating to the patient's overwrought sensibilities as the opposite course is morbid and depressing. Everyone knows how trying, under some severe mental stress, is the light-hearted, unfeeling prattle of an acquaintance who knows nothing of the strain we are under. To imitate that sort of attitude, would be foolish and futile.

What gives strength and composure in such times of stress is the ministration of a friend who knows, but who thoughtfully and tactfully relieves the situation of all its morbid, sombre *entourage* and sheds an air of calm confidence in the outcome. This should be the ideal at which our pre- and post-operative treatment of surgical patients should strive. "It is not death that men fear," said some ancient philosopher, "but the paraphernalia of death." The same is largely true of a surgical operation; and it should be the aim of our modern system to shield the patient from its horrible paraphernalia, both psychic and material.

We have emphasized the importance of this matter in surgery, because it is there that we doctors are guilty of the greatest neglect; and there, perhaps, that patients suffer most from our neglect. But the lesson applies in every department of medicine—in the arrangement and decoration and conduct of the doctor's office, in the matter of prognosis (many a sensitive patient has been psychologically, if not actually, killed by the abrupt announcement of his death-sentence, either verbally or as the doctor's expression), in the management of the sick-room, and, in short, in every relation between the physician and the patient.

Whatever we may think and whatever may prove to be the case concerning the direct effect of anoci-association upon actual surgical shock, nobody can gainsay the influence of emotions and sensibilities upon vital functions and resistance during the consciousness of the individual. And it is certainly an important part of the physician's business to utilize this psychic element.

Time was when grocers sanded the sugar and clothiers sold shoddy for honest woolen, and merchants lied steadily about their goods—asked two prices with the expectation of haggling and coming down—and the motto was "Let the buyer beware!" That time has passed with the majority of American business men. They have found they can make more money in the long run by telling the truth and asking one price.

—Dr. Frank Crane

BE YOUR OWN DOCTOR

One of the readers of CLINICAL MEDICINE, Dr. R. W. McCollum, of Farber, Missouri, sends us the circular of a certain concern which advertises a line of household remedies. As to the nature of these remedies, we have no way of knowing. They are to be identified by such terms as "cold remedy," "sore throat remedy," "kidney remedy," "stomach remedy," "worm remedy," "catarrh remedy," "whooping-cough remedy," etc., but the purchaser is urgently advised to use these preparations and "stop paying doctors' bills."

Having no information as to what these things contain, we are not in a position to say whether they are good, bad or dangerous. So far as we know, they may be excellent, but we are sure that no physician who is interested in the welfare of his patients would dare to suggest to any of the families whom he attends that they should use these unidentified drugs. For all we know, they may contain toxic or habit-forming drugs. Therefore, we would say to the doctor, should he be asked by anyone as to whether they ought to use secret remedies of this class, to answer, "No, don't use them."

However, that doesn't mean that your patient should get along without household remedies of any kind. However desirable it may be (and we all know that it is desirable) that your clientele come to you whenever thay have an ailment, no matter how slight, you can depend upon it that they won't. The average family cannot afford to send for a doctor every time baby has the colic or grandma has a cough.

This being the case, isn't it far better that the physician make it a practice to advise the people as to what they ought to use for the simple ailments? To place in their hands harmless remedies for the ordinary ills is far better than to let them spend their good money for all kinds of patent nostrums or such remedies as the too-obliging druggist may suggest.

You know what every family probably will need. Talk things over with them frankly, and see to it that they are supplied with such things as simple laxatives, harmless remedies for colds, something for the temporary relief of pain—until the doctor can come—something to relieve the baby's colic, a remedy for simple indigestion, and so on. However, in providing people with these simple remedies, always embrace the opportunity to explain how easy it is for the simple ailment to become a severe one, and warn them not to wait too long before calling in the doctor.

The physician who in this way keeps in touch with each family's minor ailments, and who is accepted as the advisor-in-general in all matters concerning their health, is in a most favorable position to prevent the development of disease beyond the point where it is difficult to control.

Nine-tenths of the mistakes in differential diagnosis are made by not looking and only one-tenth by not knowing—Dr. Charles E. Nammack, in The Medical Record.

COCKROACHES AS CARRIERS OF THE CANCER-GERM

From time to time there have been recorded in these columns accusations and proofs against various domesticated animals and insects as the conveyors of transmissible diseases; and the names of these mischief-breeders have been duly displayed in our annual indexes. To that growing list of insidious and unsuspected enemies of the human race now must be added the cockroach family.

The suggestion that cockroaches may disseminate a *contagium vivum* that induces the formation of cancer has of late been advanced by two European investigators independently and seems to attract some attention. Thus, W. Melvill-Davison, of Great Britain, believes he has ascertained that a certain alga gives rise to this malady, while at the same time he discovered the same vegetal form flourishing in the intestinal tract of the different species of blattidæ available for tests.

Dr. Melvill-Davison does not claim to have established positive proof for his hypothesis, but adduces, in corroboration, inferentially, the other fact, that at the biologic laboratory of the United States Department of Agriculture there has been isolated a specific vegetable parasite which Smith and Townsend feel confident is the causative factor in the production of plant-cancer. This, of course, merely hints at similarity of nature and origin of animal- and plant-cancer.

On the other hand, another investigator, Professor Fibiger, of Copenhagen, claims to have found in rats a species of worms that cause cancer in them, and that the larval stage of these worms is passed in the intestines of cockroaches. Here are two distinct charges against the cockroach. In this connection, it may not be amiss to point out that now even the common sparrow has come under suspicion of being a disease-breeder; merely, though, on general principles, because of its being a sort of scavenger about human habitations.

In the Miscellaneous Department, in this issue, will be found a practical and instructive contribution dealing with the habits of cockroaches, and the best manner of getting rid of the pest. It should interest every doctor, both in his private capacity and as the adviser in such matters in his community.

ITCHING: CAUSES AND CURE

Itch—not our childhood acquaintance, the venerable scabies "septennis," but itching, whether owing to urticaria, jaundice, eczema, intertrigo, prickly-pear, pruritis senilis, vulvae or ani, buckwheat, or whatever it may be. These and other maladies have this in common, that they itch.

What is itching? A peculiar form of irritation of the distal termination of the cutaneous nerves. Applying the Sherlock Holmes method, we should deduce from the fact of irritation the presence of an irritant. So, before attacking the malady directly, we pause to ask, Why the itch?

A European writer said that after exhausting his other remedies vainlessly upon anal

pruritis he bethought him of the possibility of parasites, with the result that since that time he commenced diagnosis with a search for such. That may do for Merry England, but in not a solitary case has this writer detected any kind of parasite, except in just one, when seatworms were found to be present.

Each of us really bases his views, not so much upon the correlated sum total of his experiences and his accretions of knowledge from without, as upon some one particular case that made a profound impression upon him. So, I never meet with a case of anal pruritis without remembering one especially aggravated instance, in which the itching was associated with a sacculated colon and retained scybala. The irritating product induced the itching, which was relieved only by the complete removal of the decomposing lumps.

Many times since then have sufferers from itching been relieved by the same measure. Always the treatment is initiated by testing the urine for indican, then washing out the colon with laxatives and flushes, until no trace of indican can be detected is kept up. Usually there remains nothing more to be done—the pruritis has ceased. This seems to be especially true of senile pruritis, which tends to confirm Metchnikoff's hypothesis of old age depending upon fecal retention.

So with vulvar pruritis—cure the endometritis, dislodge gonococci and other pests from the uterus and fallopian tubes and from the nooks and crannies in which these petty monsters take refuge. By local means? Yes; but supplement by saturation with calcium and arsenic sulphides—and by the same attention to the bowels demanded by pruritis ani.

The itching of jaundice is "something fierce." In the midst of the agonies of gallstone colic the patient has stopped lamenting long enough to beseech the doctor to get ready for the coming pruritis. This results from the irritation by the bile-elements in the skin. A full sweating dose of pilocarpine eliminates these and ends the itching—if the jaundice stops. But, if this has its origin in the obstruction of a hepatic duct by a tumor or other continuing cause, jaundice and itching both will recur.

Prickly heat, urticaria, and other forms of local cutaneous irritation usually are relieved by a hot mustard-bath. But in all forms of pruritis removal of the irritant by means of pilocarpine and removal of the toxemia by purging are indicated.

Diabetes, nephritis, and other maladies featured by defective renal function often are attended by itching. This symptom may direct attention to the grave malady underlying it and serve as one indication of the results of treatment.

Urticaria, chilblains, and so on, we formerly treated by elimination and local solaces; but Sir Almroth Wright has taught us that these maladies betoken a constitutional deficiency of calcium and are cured by the use of calcium chloride or lactate. True, but don't give calcium too long,or you may lose your patient through thrombosis of the cerebral sinuses. Moreover, calcium chloride is an intestinal antiseptic, and—*quien sabe?* We know something, ourselves, of the results following a well-made toilet of the intestines.

In all cases of pruritis, therefore, the underlying conditions must be studied. We *must* see to the bowels. Even in true scabies, dependent upon the acarus, there is something in the constitutional state, for some children among infected schools remain immune—and saturation with the sulphides is more effective and easier than the application of pounds of sulphur ointment or copper oleate. These will cure, yes, but they do not prevent acari from wandering back from the clothing and reinfecting the child.

The man who does not use the active principles in medical treatment is as far behind in the practice of medicine as the surgeon would be who tried to remove a stone from the bladder with a handspike.

—Dr. Joseph Haigh

WHAT YOU SHOULD WRITE

He wrote of Lords and Ladies
(He lived in Arkansaw);
He wrote of untold millions
(A "V" filled him with awe);
His tales, indeed, were many,
His sales, alas, were few;
He wrote of things he'd *read about*
And not of things he *knew*.

A writer in *The Editor* makes this verse the text for a very pertinent homily anent the financial and other rewards which come to the writer who cultivates his own literary garden. It may not be a big garden; it may not be a particularly rich one; but, if you watch it closely, dig in it, water it, fertilize it well, you will be well rewarded for your labors.

The contributor to *The Editor* began by writing poetry, and stories "full of real imagination, flights of fancy, depths of feeling," but he found that the magazines did not want them. She was a school-teacher, and the verse above, when she read it, brought her up with a jolt—and the jolt did her good. Then she began to write about teaching and children.

She knew them, and her stories and sketches went like hot cakes.

CLINICAL MEDICINE is offered hundreds of "stories" every year, on all sorts of topics. We print as many as we can, but it is impossible to use them all, and when it comes to the point of rejection, we are forced to return to the authors those that in our opinion would please our subscribers least. We know that what our readers are most interested in are the *records of actual experience.* Fine-spun theories, flights of fancy, elongated records of things dug out of books, all may be well enough, but they can not compare in living interest with the story of a real achievement, told by the man who actually has done the thing he is telling about.

And, so, we ask you again, as we have so many times in the past, to *tell us of the things you know.* If you have treated fifty cases of ingrowing toe-nails, have mastered the difficulties, and know how to make good with this simple but troublesome ailment, then write us about ingrowing toe-nails. If you have dug up something that will cure, or measurably relieve, asthma (we are particularly anxious to know more about asthma), then write it up for CLINICAL MEDICINE. If you have devised a simple operation for hydrocele, or have tried one of the newer vaccines, or treated fifty cases or so of chronic bronchitis with the alkaloids, or have *done* anything else that has added to your efficiency as a doctor, tell the story, and *in the fewest possible words.*

You needn't worry as to whether it will be printed. Editors (even medical editors!) are on the lookout constantly for material of this kind.

Only those of us who do not know what medicines can do deny their efficacy.—Dr. Abraham Jacobi.

THE MANAGEMENT OF HAY-FEVER

The victim of that distressing malady, hay-fever, gets little sympathy. Everybody knows that it involves no danger; its objective phenomena excite amusement rather than concern; it occurs in folk who are well-to-do, eat too well, sit too much; and an attack offers an excellent excuse for a delightful trip to mountain or seaside resort, where the cynical observer also would like to betake himself had he the means, though perhaps under some different excuse. The consciousness, however, that he is being looked upon in this frivolous light further exasperates the unfortunate sufferer, who finds little exhilaration in uninterrupted sneezing and continuous running at nose and eyes. Blessed is the relief when he passes north of the latitude of Grand Rapids and sees the inviting shores of Petoskey or the historic isle of Mackinac loom into view.

But more than likely the ungrateful man refuses to accept the good the Gods confer, and asks himself why he should be condemned to exile himself from his Chicago den, where engrossing business interests must wait until he gets done sneezing.

Why should he? Why must a man struggle through life with this handicap, striving to hold his own among competitors who happen to be free from this affliction, and who are ready and eager to take advantage of his temporary disability?

Has modern medical science won such brilliant victories, eliminating one malady after the other from the category of incurable diseases, abolishing the yellow scourge of Panama, rendering the malaria of Egypt a tradition, and, yet, it can not help a fellow sneezing his head off? Go to!

The trouble is, that hay-fever is not a disease to be treated symptomatically, but, like poison-ivy, it must be traced to its etiologic factors and the last vestiges of its roots dug out remorselessly.

Shun all the unknown and much-lauded secret remedies—the temptation to slip in a little cocaine is too much for the nostrum-vendor. Why every hay-fever plutocrat is not a cocaine-fiend is a puzzle; for, the relief following in its wake is so certain, the harmlessness seemingly so evident (to the unknowing layman), and the formation of the habit so insidious.

Twenty-five years ago a brilliant young Philadelphia specialist succeeded in a series of cases by applying electricity in its destructive form to the offending nasal mucosa; but his success seems to have been forgotten. Local treatment, however, cannot succeed when the malady is merely the local manifestation of a constitutional vice.

It would seem that the factor of heredity were beyond our reach; still, a good authority recently has declared that we have overestimated the part played in our lives by ancestral influences. Habit and environment account for nearly everything. Yes, when the erstwhile danseuse becomes Her Grace the Duchess, it is not long until this product of the slums shows the manners of one to the manor born, and the only differential trait of her sons is the increased brain power derived from the cross.

Dealing with hay-fever, we may safely individualize the patient, and begin with him. Let him have Chittenden's demonstration of the small amount of nitrogen that one actually requires, and he may practice on the problem of ascertaining upon how little he himself can thrive. Drop out the caffeine beverages and prescribe oatmeal-water for drink, and order food that he has to chew. Teach him the physiology of nutrition. Indoctrinate him with the maxim of "clean out, clean up, and keep clean," for, if there is a solitary hay-fever person who is not autotoxemic, that individual has not appeared on this writer's horizon.

Use all your wits to find some form of exercise the patient will like so well that he will watch the clock for the time to drop work and get to it—golf being the first thought. Indorse the matutinal cold bath proposition, and get him started on it.

The foundation thus securely laid, we can begin to build. Break up the habit of sneezing by forestalling the annual attack for two years. Correct all nasal abnormalities, and restrain the tendency to turgescence by constringing the mucosa. Apply a chromic-acid solution, very dilute, at first, but increasing it to toleration limits. When the season of dolor approaches and before the patient leaves his home, begin to protect the vulnerable surfaces by spraying them with an oil solution of thymol iodide. This iodic compound is antiseptic, the oil coats and protects the surface, and sooths any beginning irritation. Should the discharge begin, despite these precautions, then order a spray containing suprarenal solution, combined perhaps with other indicated remedies; a full dose of atropine, preferably in combination with quinine and camphor, helps to dry it up.

Do not fail to look for the defects of elimination that lie at the root of so many of these recurring ailments. That oft-repeated advice to "clean out, clean up, and keep clean" is just as necessary here as elsewhere, and we can make no mistake in stirring up that great, important, but little understood organ —the liver. That good old-fashioned remedy, calomel, may well be reinforced by podophyllin or other cholagogs.

Also, do not overlook the value of the alterative drugs—for generations we have recognized the merit of iodine, arsenic and quinine, and we know how the fighting hosts of the body are reinforced by nuclein. And it is a striking fact that, when urinary examinations are made, many of these patients show the presence of an acid intoxication, probably of long standing; and of course this demands attention.

While the pollen of various plants has been indicted as the specific cause of hay-fever, the evidence that it is the sole cause is not quite convincing. No doubt it is an etiologic factor, but there are probably others of a bacterial character, still unrecognized. Why do not more of you experiment with bacterins—especially with autogenous bacterins? There seems to be here a fertile field for constructive work for many members of our great "family"?

The writer is inditing this message from the lake shore near Muskegon. In the colony now assembling are four hay-fever victims. None of these is affected while sojourning here. I do not attribute much influence—except, maybe, the psychic factor—to the air wafted from the lofty pines that sway so gracefully over our heads, but (and, pray, don't let the ladies hear us!) a great deal to the physical work they do. But every one of these ladies is busily at work from dawn to night, engrossed in building, decorating, improving, planting, cultivating, creating homes out of the virgin wilderness, gathering wildlings—berries, flowers, firewood. Forsooth, the pioneer forbears surely have left their traces in these women. In very truth, they have not time to think of ailments, going to bed each night thoroughly and delightfully exhausted, while the morning-dip in the nearby lake has an ever increasing number of devotees.

The remedy for hay-fever? Revert to pioneer conditions; make a home out of a wilderness; levy on nature for its treasures; forget for a spell the luxuries and demands of modern civilization.

Here comes our own "hay-fever" victim now, panting with her climb to the top of the hill where we have perched our home! She drops into a chair; cheeks glowing, eyes sparkling, health and happiness in every line and movement.

"Where have you been?" "O, in the valley back; and just see the wild strawberries we found. I never knew there were so many blueberries as we saw. And we found a lot of grapevines, tame ones gone wild and also real wild ones—the wild ones make the best jelly; and when you have cut out the brush the ground is seen covered with blackberry bushes; and I must find out what can be done with all these wild cherries and the June-berries, and the woods are full of mushrooms and some of them must be good to eat; there's lots of young sassafras and you

must dig some roots to make tea; and we had nineteen fish in the net this morning; and the lettuce and radishes grow faster than we can eat them; and I've dug a lot of wild honeysuckle to plant about the porch; and we found a whole patch of pink orchids, ladies' slippers; and that wood that twists so curiously is witchhazel, and Bobby is going to make table legs out of it; and the pine squirrels eat right out of my hand— — — —" I fled! How can a woman who was just gasping for breath talk a blue streak for a quarter hour without so much as a comma punctuation!

Treasure your exceptions. When there are none the work gets so dull that no one cares to carry it further. Keep them always uncovered and in sight. Exceptions are like the rough brickwork in a growing building, which tells that there is more to come, and shows where the next constructive work will be.—W. Bateson.

KEEP ABREAST OR IN FRONT

It is good for a man to be recipient, to be yet able to see good in any shape in which it may be presented to him, to sink his own personality to the point where he can study the other man's view and estimate the value of his arguments.

Likewise, it is bad for a man to be so possessed by his own hobbies that he is unable to give just consideration to others.

We have bumped about this old world enough to realize that, however smart we are, however wise, learned, far-seeing, there are others. As we grow older, the more fervently we hope that, in the end, when the great final accounting shall be made and the business of our existence be wound up, we may be found not hopelessly below the average of our fellow-men—that we even may touch par.

Well, to tell the truth, our life has been filled with so many blessings that we sometimes feel that for every little bit of good we have done we have been so generously compensated already that there will be only the debits to show at the last. Try as we may to find opportunities for entering credits, and we get more hopelessly in debt. A child, crying bitterly, we seek to soothe his grief, to relieve his pain, to chase away his tears; and, behold! he decorates us with the priceless jewel of a child's love.

Which shows how far afield a man may wander.

We started out to call attention to the danger of one's becoming so absorbed in his own pet hobbies that he can not give justice to others. Now, we have been suspected of a partiality toward the alkaloids, and the development, through them, of a really scientific therapeutics. In a measure the accusation is true; but when it comes to the accusation one time often made, but not recently—that we advocate nothing but the use of active principles, it is not true, and never has been.

Possibly—probably—we should have fallen into that error, but for our close association with the vast body of American physicians. This journal accomplished this; and of all our works The Alkaloidal Clinic, later expanded into Clinical Medicine, has been the most valuable.

We find a new hobby, mount, and ride it like John. Pretty soon there comes from a reader the warning hail, "Pull up!" We ride on. But here another reader, then yet another, from this side and from that, comes the cry, growing into a chorus, and we do pull up. Others have their hobbies, too, and invite us to take a ride. We sometimes accept, and so our hobby-stable grows populous. Father Coleman invited us to ride on his steed, calcium sulphide; Lawrence, on his, calcidin; Aulde, on nuclein; Croftan, on calcalith; somebody else, on the sulphocarbolates; and so down the line. None of these drugs was an alkaloid, but they all proved of value and we adopted them.

Meanwhile, the body of the profession was following along the lines of development opened by the laboratories. The scientific methods of the chemist led to the precision of diagnosis, replacing the old-time guessing by mathematic certainty—the modern way of telling the time by a watch. Physiologic chemistry also developed the organic products, serums, antitoxins, opsonins, bacterins. We could not be in close touch with the great body of practicians and remain blind to the value of these and other agencies.

And, so, we still advocate the alkaloids, and the rest of the active principles, and we urge the necessity of laboratory diagnosis and of serum and bacterin treatment. For we are active-principle advocates, surely; but, before and above that, we are physicians.

ASTROLOGIC FOREBODINGS

Does error ever die? Is not superstition immortal, unkillable, indestructible as matter itself? Do we not hesitate to initiate aught on Friday, because it is unlucky, thus perpetuating the tradition that looked upon Saturday (Saturn's day) as unlucky, because old Saturn was grouchy over having been dethroned by Son Jupiter? For unnumbered

centuries—yes, before Adam—this belief held sway. With the spread of Christianity, the traditional ill-favored day was changed to Friday, just as Yule became Christmas and the Saturnalia were renamed the Carnival. Truly, the nature of man changes not at all; although he periodically puts on a new suit of beliefs and language.

An astrologer has predicted dire happenings for the next month, or so. The sign of Gemini ruling the country, Mars entered Gemini July 29, and proceeded to kick up trouble. Wars, rebellions, riots, strikes, hurricanes, and fires, also epidemics of smallpox, scarlet, typhoid, and yellow-fevers, possibly cholera, are among the gloomy prognostications. The timid may easily find corroboration. The sign of Gemini! And is not Woodrow's pat exclamation: "Oh, Jimminy!" and is not a Mexican city known as Jiminez? (Now don't pronounce it, please, or you'll spoil the string.)

Yes, we all smile indulgently over the silly folk who allow themselves to be influenced by those absurd superstitions. But—do *you* begin a journey on Friday; do *you* remember the fortune-teller's predictions; do *you* walk under a ladder or look at the new moon over the lucky shoulder? Honest, now?

The proofreader of this journal, who has imbibed much wisdom from working over our writings, once in the list of starters for a race noticed an error in the spelling of the name of one horse. Taking this as a tip, she put up a bet on that horse—and won twenty dollars!!!

No concessions ought to be made to the prejudices of maternal psychology in the treatment of babies, to whom bottles (with the one exception) are about as much use as a good bedside manner to a sick cow.

—Sir Horace Plunkett.

PARALYSIS AGITANS: THERAPEUTICS

When street-cars were first proposed in Philadelphia, the medical profession of that devolutional burg met in solemn conclave and adopted lugubrious resolutions condemning the innovation unreservedly and predicting the direst consequences in the way of originating and aggravating disease.

The fat fields of Pennsylvania breed content; the rocky hillsides of New England compel enterprise. The starving Highlander robber is glorified in poesy; his prosperous, well-fed prey of the Lowlands has never an apologist, scarcely a sympathizer.

We have before us a letter so characteristic that we feel impelled to quote from it some lines. One of the wise things Hahnemann said was, that no clinical records were more valuable than those made by physicians upon themselves as patients. One correspondent, a doctor of no mean caliber, one far above the average, professionally, suffers from a form of paralysis agitans. He writes:

"I am still alive, but when not using hyoscine-morphine each twenty-four hours I am shaking like an auto-car when standing still with its motor running. Life is practically unendurable; for, besides this awful tune-toning tremulousness and agitated state, when meeting a friend there comes over me an almost rocking, gigging (like fearful stage-fright, with back-head ache, convulsive and guy-rope-head-to-neck-and-shoulders feeling to cap it), which, with loss of use of hands, so that I no longer alone can wash, dress or feed myself, makes life a burden."

"I have dropped all but a 7 to 10-day dose of sodabin [?], 5 to 10 grains, having found my system won't do its work so well without it; kept bowels pretty well washed out with enemas; then the hyoscine-morphine combination which I had used to aid me when still able to work. When there has been a toxic feeling —possibly accumulation of hyoscine—I have been amazed by a furring or exfoliation of the skin, which is controlled with hydrogen peroxide, but, better, by drinking lemonade. This leaches out the accumulation, almost 'right now'; the change being marked in general feeling. Drinking 1 to 4 glasses of ginger-ale in the afternoon brings the change about right. I think this alkalinizes the blood-stream, making possible a hurried elimination of the morphine, maybe of the hyoscine. Larger doses are then required. It is a nice way of getting rid of the 'overdosed' feeling a hyoscine patient has.

"I believe I have discovered in vibration properly attuned, and sufficiently and satisfactorily used in conjunction with stretching, light-baths, passive movements, the agency needed to make shaking palsy curable.

"When I am convulsed and feeling most miserably miserable, as if I were going all to pieces if not immediately 'cut loose somewhere'—bones aching and begging, shaking till I can't talk, every nerve and muscle strung to the breaking point—when all this is so real that one feels he can't possibly stand it, I can mount a running horse or an auto over a rough road, and almost instantly have my state transferred from a hell to a heaven. Senility vanishes for the optimism of boyhood. Until the car stops I am able to jest, laugh, and feel my natural self, even as I am not when relieved by coffee and a sedative. Shaking the hands is very, very grateful to me.

The motor-driven vibrators, properly used, perhaps do some good, but very little. They can not be geared down slow enough, the stroke lacks body and length of wave. I feel certain of having discovered key-notes to measures of treatment that may give relief in early cases, if not even effect a cure."

Dr. Rees does not mention the street-car, but we assure him he may secure vibration from it quite as rough, often, as from an automobile over a corduroy road. There's something real, something alluring, yet elucive, in this record of a doctor's individual experiences. We suggest that the victims of paralysis agitans constitute themselves a collective-investigation committee to work out the problem.

No one gets very far, ever accomplishes anything very great or really worth while in life, who spends time worrying over what people will say about him. People, as a whole, are much alike. Envy and jealousy are always ready with their poison-venom, and will have their way. The thing to do (but always given a clean life and a clear co science) is to buck up and go ahead—and "keep a pullin'."—Dr. W. C. Abbott.

IMBREEDING-DEGENERACY AS A CAUSE OF BRONCHOCELE

While the "geologic," i.e., water-borne, theory of the causation of goiter is the more generally accepted one, the number of skeptics and investigators appears to be rapidly multiplying; and so are the explanations. Probably the latest suggestion is that advanced by Dr. Sittmann, who, taking issue with Dr. V. Kutschera, and others, some months ago addressed the Medical Society of Munich on this subject; and it seems worth while to reproduce in substance his ideas, as they are found quoted in the *Muenchener Medizinische Wochenschrift* of April 22.

In the first place, Dr. Sittman maintains that—as so often—we must look for more than one single cause productive of thyroidism, whether drinking-water be concerned, or not. However, so many facts often seem to militate against the water-theory that he is inclined to consider the adduced proofs more as coincidences.

Next, Dr. Sittmann agrees with others, ethnics may play a role some races possibly being more liable to the lesion than others. Thus, Kutschera himself points out how, for instance, goiter and cretinism are common in all those districts of the Alpine province of Vorarlberg in which 500 years ago there settled inhabitants from the canton os Valais, and which then was permeated with strumous disease. Those immigrants have so preserved their individuality that they are instantly recognized as Wallisians, that is, of the stock of Valais, or Wallis. On the other hand, the neighboring Rhaeto-Roman stock of Montafon are free from these disorders. Similarly, the Romance inhabitants of the Vintschgau, in the upper valley, are badly affected, while the Goths of the district of Meran are immune.

Now, the new theory of the etiology of thyroidism—at least as the principal cause among others—advanced by Sittmann is the degeneracy incident to imbreeding. His proofs are taken from observation and from his practice; and ethnology is not sufficient to explain the facts, as, possibly, such as those adduced in the preceding paragraph.

Looking over the field, Sittmann was struck by the predominating prevalence of goiter and, more especially, of Basedow's disease, i.e., exophthalmic goiter, in the lowlands of northeastern Europe, the Baltic provinces. But, so far as determinable, this condition affects almost exclusively the upper strata of the populace, while the lower strata are almost exempt. Now, however, the latter element, the socially inferior, is the indigenous, and of Slavic type, while the upper, physically defective classes belong to the Germanic race.

And here is where Sittmann finds the postulated factor of phylogenetic degeneracy. For, he points out, while the Germans invaded and subdued these lands of the Baltic coasts more than 700 years ago, they preserved their stock uncontaminated among the nongermanic races. This, however, could be only by constant intermarriage within their kind, so that a widespread consanguinity must at present obtain among the ruling class of that region.

And here is the second assumed proof for this degeneracy-hypothesis. Race-constancy of a new type can be attained within a relatively brief period of time only by frequent and constantly repeating imbreeding of the breeds to be amalgamated. Then, if we take a recent but already stabilized breed of animals and within this new race begin to pair consanguineous individuals of highly specialized strains, then it may happen that besides one or two young ones showing certain advances along the lines desired by the breeder, within a litter of this kind there will be found a number of individuals exhibiting phenomena of pronounced degeneracy. As some of these stigmata of degeneracy among these interbred animals, the author mentions, above all, bronchocele, and commonly associated with this also psychic defects or anomalies of bone growth. Loss of pigment also

occurs. But, it is averred, other degenerations are in evidence.

The author's experiments were performed largely with fox-terriers—a race that has become fixed only within forty or fifty years; and repeatedly he has obtained as many as four goitrous whelps within an otherwise racially highly developed litter of young terriers.

This observation applied to man, one soon becomes aware how many of the regions known as goitrous are such where the inhabitants have been cut off from the world, especially before modern travel set in; and where little, if any, foreign blood was infused, so that imbreeding has been the rule for many generations. This certainly does seem to account for the great prevalence of goiter, exophthalmos, and cretinism in the secluded mountain-regions, and for which calcareous waters have been accused. The Algaeu region of Switzerland and Suabia, with its manifold, noncretaceous, geologic formations, offers a good proof in this respect.

IS CALCIUM UNREMOVABLE?

A correspondent who signs himself "an aging subscriber" refers to Dr. Waugh's paper entitled "That Thy Days May be Long" and asks: "How can the body rid itself of the surplus calcium stored in the tissues of the aging man?"

One might reply by saying that the one need is, to live physiologically. Study your own case from the point of appreciating your vital resources and so conserving them as to insure the longest possible life, healthy, enjoyable, and useful. Study your digestion, your elimination, your assimilation.

Arrange diet, drink, exercise, mental occupation, recreation, bathing so as to meet exactly your individual requirements. Eschew worry, fatigue, excess. Don't be anxious to appear young or unwilling to acknowledge your years. Maintain the physical and mental energies by appropriate exercise. Don't let yourself fall into the doddering senility of the superannuate. Find the method of being useful and ever of consequence, suitable to your abilities, and conditions. The active man keeps young, the one who permits old age to render him slothful stiffens and cramps.

The digestion—the whole alimentary tract—needs extra care, for the gradual senile debility begins here. "Clean out, clean up, and keep clean;" not by continued purging, but by the mildest methods possible, varied, to avoid habit forming. Fasting, varying the habits so as to give the arterial coats exercise, avoidance of rigid routine, are important. Travel is ideal to prevent routine.

Let the lime alone. Don't induce debility by attempting to dissolve it out; but prevent further deposition of the mineral. There is more value in Metchnikoff's wild hypothesis than has generally been admitted. Drink sour milk, partake of the Bulgarian ferment. Drop the caffeine beverages and return to the oatmeal of your youth.

The present writer would like to form a club of men over sixty, to discuss, compare, and exchange experiences and suggestions. Can we do this by a correspondence-bureau? Or, else, should we organize, have a dollar annual dues, and publish a journal? Men like Nascher, who make geriatrics a specialty, should contribute; and the editor should search the periodical medical literature of the world for data on this matter. Why shouldn't the aging have their special attention as well as the children, the neurotic, the other classes of ailing humanity?

Time brings only one regret—that we had not more joy in the things that were, more belief, more patience, more love, more knowledge of the way things work out, more willingness to help toward the final result.

—Jennie June.

THE ROLE OF THE BILE

Roger, of Paris, contributes an interesting "discourse" concerning the bile, to the April, 1912, number of *The Universal Medical Record.* After discussing the action of bile upon the digestion of fats and albumin and the multiplication of the bacteria in the intestinal canal, he makes some interesting remarks upon its action on mucin, a few paragraphs of which we venture to quote.

"Under normal circumstances the walls of the intestine contain a ferment—mucinase—that coagulates mucin, causing it to pass from a liquid state to that of obvious masses. Now, bile opposes this coagulative ferment action, as a very simple experiment clearly shows us. Into each of two tubes let us pour a little mucin in watery suspension. One tube we will keep as a control; to the other we will add either some fresh bile or, what is equally effective, some bile that has been heated in an autoclave. The action of bile is not modified, be it noted, by heat. Well, into each of these two tubes let us pour a few drops of a glycerinated extract of intestinal mucosa. The contents of the control-tube become cloudy, in accordance with the

strength and activity of the exact mixture employed, losing transparency with greater or less celerity; sometimes almost at once; but, in other cases, it is not until after an hour's incubation in the warm that a grumous mass is thrown down, the supernatant liquid then remaining clear.

"If we now take this clear liquid and to it add a trace of acetic acid, although before the ferment had acted a copious precipitation would have taken place, there occurs at the most a trifling cloudiness, for the mucin present has been in great part, or entirely, already thrown down by the mucinase.

"But with the tube to which bile has been added the result is quite otherwise. If much bile and little ferment is present, no precipitate occurs on adding the acetic acid; though, if the bile has been added in insufficient proportion, at the end of twenty-four or forty-eight hours there may be some cloudiness or a slight deposit.

"We can now well understand how it is that mucus remains liquid in the upper bowel, and why, when it coagulates, it does so in the lower portion of the alimentary canal. We can also realize how it is that the pseudo membranes of mucomembranous colitis are produced. They are the result of coagulative processes which may be ascribed, sometimes to biliary insufficiency, sometimes to a superabundance of mucus, and sometimes to an excess of mucinase.

"It is doubtless true that, as M. Riva has shown, in health the feces do not contain mucinase. But this is not the case in those who are the subjects of mucomembranous enteritis: with them it is found that the ferment is present in amounts proportional to the quantity of mucus. Similar findings have been reported by M. Trémolières. He tells us that in animals, as in mankind, mucinase is only present in the feces under pathological conditions.

"These experimental findings will support some therapeutical deductions. It it be true that bile hinders the coagulation of mucus, clearly, the prescription of oxgall is indicated for those patients who suffer from mucomembranous enteritis. Certainly, by means of such treatment we cannot be said to *cure* the affection; but at least we may hope that the false membranes will disappear and that the pangs which attend their expulsion will be somewhat assauged."

Instead of using crude ox-gall, a disgusting therapeutic product, which tends to putrefaction and as found in the pharmacies inevitably smells to high heaven, the progressive physician will surely employ the purified bile-salts which are now available on the market in very elegant forms. This remedy should be employed in connection with other indicated therapeutic measures, particularly thorough cleansing of the bowel by the daily high enema, in every case of mucomembranous enteritis.

THE USE OF BACTERINS IN CHRONIC BRONCHITIS AND ASTHMA

A number of troublesome cases of chronic bronchitis, recurrent in character and resistant to all ordinary methods of treatment, are described by J. H. Harvey Pirie in *The British Medical Journal* for June 14, p. 1268.

Cultures were made of the organisms found in the sputum of these patients, and in these, pneumococci and the micrococcus-catarrhalis groups were found to predominate, while streptococci, staphylococci, Friedlander bacilli and micrococcus paratetragenus were present in a goodly number of instances. In all, 16 of these patients, were treated with autogenous bacterins. Of this number, 7 were practically cured; 4 were markedly improved, in 4 more the improvement was only slight, but in only 1 case was there no improvement.

Dr. Pirie strongly advises that, before winter sets in, all individuals who are subject to recurrent colds should receive protective inoculations against those organisms to which they are especially sensitive. Either autogenous bacterins may be employed, or else one of the socalled combined bacterins for colds that are on the market. The bacterin is not recommended to the exclusion of regular medicinal measures, but rather as an adjunct to the indicated local and general treatment.

Pirie also treated 15 sufferers from asthma. In all these persons pneumococci were present, and numbers of the micrococcus catarrhalis were present in 14, while staphylococci, streptococci, Friedlander bacilli, diphtheroid bacilli, and so on, were found in others. From these 15 cases, 6 must be excluded, because treatment was too short to secure permanency of results. Of the remainder, 7 were practically cured and are now free from asthma; 5 being considerably improved, 1 showing only slight improvement, and 1 was not benefited at all.

The author believes that the value of bacterin treatment in such ailments is very fairly indicated by these results.

Leading Articles

The Treatment of Sexual Neurasthenia

By WILLIAM J. ROBINSON, M. D., New York City
Chief of the Department of Genitourinary Diseases and Dermatology, Bronx Hospital and Dispensary; Editor of The Critic and Guide and The American Journal of Urology; Author of "Never-Told Tales" and other works

EDITORIAL NOTE.—In this paper Dr. Robinson completes the discussion of Sexual Neurasthenia, begun in the May number of this journal, page 393. In this installment treatment only is considered; for the discussion of the etiology and symptomatology we refer you to the first portion of the article, which should be read with care by everyone.

IN A FORMER issue I discussed the etymology and symptomatology of sexual neurasthenia. In this issue we will consider the treatment of this most important affection.

To treat sexual neurasthenia successfully, we must, of course, know the cause of the neurasthenia, and the kind or type of neurasthenia we have to deal with.

The Two Types of Sexual Neurasthenia

To attempt to put each variety, each different type, of sexual neurasthenia in a special rubric and designate it by a special label, would be a thankless task. For the varieties are numberless and run into each other by imperceptible gradations. But, still, we are justified in recognizing two principal types of this disease. And the type to which our patient belongs will materially influence our prognosis and treatment.

To define the two types briefly: In the first type, the neurasthenia is produced by the impotence, or the neurasthenia and the impotence are the results of local causes; in the second type, the impotence with its concomitant symptoms is the result of the neurasthenia. To put it in other words: In the first type, we have the sexual trouble or abnormality first, the neurasthenia after; in the second type, we have the general neurasthenia first and the sexual trouble after. And we must remember that there are numerous intermediary types, that is, cases in which both causes are exerting the evil influence at the same time.

To give some brief illustrations

Case 1. Man, age 30, almost completely impotent (very weak erections and immediate ejaculations) and typically neurasthenic. History shows excessive early masturbation, then rather free sexual indulgence, then three attacks of gonorrhea; the last one about two years ago. The impotence has been coming on gradually during the past year, and the neurasthenic symptoms, so far as he remembers, during the past six or eight months. His financial condition is excellent, he is entirely independent, he has nothing to worry about, his life runs in rather pleasant channels. He has always been gay and jolly, but lately has been feeling as if his life were not worth living.

Even before examining the patient I make my mental diagnosis of definite local trouble, with neurasthenia as a consequence. Of course, the impotence in a man, with theatrical connections, who was in the habit of "having all the actresses and chorus girls he wanted" and who now under one pretext or another must avoid them, is alone sufficient to induce neurasthenia.

On examination, I find an extremely congested posterior urethra, a swollen colliculus seminalis, also a slight stricture and an enlarged and extremely sensitive prostate gland; light pressure brings forth abundant catarrhal secretion. I give him a very encouraging prognosis; and massage of the prostate urethral sounds and dilators, the psychrophore, instillations of silver-nitrate solution, and then cauterization with the

same solution, but 20-percent strong, bring about in six months a complete cure both of the impotence and the neurasthenia. There was practically no treatment of the neurasthenic symptoms proper.

Here we have a clear case of sexual neurasthenia, resulting from local conditions and disappearing with the cure of the local conditions.

Case 2. Almost complete impotence and severe sexual neurasthenia. The patient presents a goodly number of the symptoms characteristic of the neurasthenic. The history shows moderate masturbation between the ages of 14 and 17, then moderate indulgence between 21 and 25 at which age he married. Never had any venereal disease. Lived a regular, moderate life and was perfectly potent for ten years. The impotence first showed itself in a diminished libido, then gradually the erections became very weak and the ejaculations premature. Has to urinate very frequently.

Questioning brings out the fact that the last three years had been very hard for him. All his savings, which were considerable and which he invested very profitably in real estate, were swept away during the panic, so that now, at the age of 38, he finds himself as poor as he was at the age of 20, and has to hustle for a living, when he thought he would be able to take it easy. Then a boy in whom they had great hopes turned out badly and is a source of humiliation to the family. His wife also died a year previously. I at once recognized that I had to deal here with a case of neurasthenia to which the impotence and the other sexual and urinary symptoms were secondary.

An examination shows the genital organs, the urethra and the prostate gland normal. Here I know the treatment will have to be principally of a general tonic and psychic character. If I do give him local treatment, it will be either for its psychic effect, or it will be only by the means of the psychrophore, because that has a general tonic effect.

Treatment Relatively Simple

Bearing these two general types of sexual neurasthenia in mind, the treatment of this disease becomes relatively simple. Where the local symptoms predominate or where they are the cause of the disease, they must be treated energetically, before we can hope for a cure. At the same time general tonic treatment, proper diet and hygiene must not be neglected. Because, even if we do cure the local symptoms which brought about the neurasthenia, it does not necessarily mean that we have cured the latter.

In many instances removal of the cause removes also the symptoms; but not in all. A local patch in the urethra that brought about neurasthenic symptoms may be cured; yet, the neurasthenia may persist, because the nervous system has, in the meantime, become so weakened or irritated that it requires treatment before it is brought back to its normal condition. While, on the other hand, if the sexual trouble is secondary to a general neurasthenia, we have to turn our principal attention to the latter, without, however, altogether neglecting the former.

The local conditions or sexual disorders which may be responsible for sexual neurasthenia have all been described and their treatment discussed in former issues. It is useless, therefore, to repeat that when we find a granular patch in the urethra it is to be treated and how it is to be treated, or, if the patient have pronounced prostatitis, then that is to be treated, and so on. We have also discussed the treatment of the more or less local neurasthenic symptoms. A few additional words, however, may not be amiss in regard to the general treatment of the general neurasthenic condition.

Importance of the Psychic Factor

It is here that psychic treatment is of great importance. The very first step in successful psychic treatment is the establishment of a satisfactory relation between the physician and the patient. It goes without saying that this must be one of complete and unquestioning confidence on the one hand and real sympathy on the other. If the physician finds that the patient is skeptical or even suspicious about his methods of treatment, and if he is unable to change this attitude quickly into one of complete confidence and reliance, he might as well give up the case. He will not cure or benefit his patient. Without confidence, everything will be going wrong; even the local treatment which in hundreds of cases has done you good service will in the suspicious and antagonistic patient seem to do actual injury. With complete confidence instilled, everything goes smoothly.

The first opportunity you have to establish or to increase the patient's confidence in you is when you take his history. An experienced physician knows, of course, many or most of a neurasthenic patient's symptoms, and it is remarkable how his confidence in you, and his respect for you, grows if while taking his history you yourself, without asking him,

recount his symptoms. The fact that you seem to read him like an open book is an important factor in creating in him a high opinion of you. Next, the examination must be very thorough—every part of the urogenital system amenable to examination should be examined, digitally, by the urethroscope, with bougie, microscopically, and so on. Then a thorough general examination is to be given: the urine must be examined, the heart listened to, the blood pressure taken, the reflexes tested, and so on.

This thorough examination has a double object: first, you may find out things which you did not suspect, and, second, it shows the patient that you understand your profession, that you take an interest in your patients, and that you are thorough; all of which increases his confidence in you—a *sine qua non* in treating neurasthenic patients.

After having ascertained the patient's exact condition, we have a good talk with him—and a good deal depends upon that talk. How many times have I seen a patient leaving the office looking ten years younger than when he came in, with a spring to his walk that he didn't have for years and a hope in his breast where everything was hopeless and cheerless for months, perhaps for years! How many times I heard them say, "Doctor, you have lifted a heavy burden from my mind and I feel again that life is worth living." Some even go so far as to exclaim, "Doctor, you have saved my life."

In this preliminary talk I explain to the patient the nature and stage of his disease—I have always believed in doctors taking their patients into their confidence—I tell him that I can help him only if I have his full cooperation. I tell him that I cannot guarantee to cure him—only quacks guarantee cures—but I shall try my best and hope I shall be successful. But of one thing I can assure him positively, and that is, that I shall quickly benefit and improve him. I know that his will power is weakened—this is one of the characteristics of neurasthenia—but I exhort him to collect all the little will-power that is left in him and that is, perhaps, lying dormant, and so to help me to cure him.

I cannot improve his financial condition, I cannot remove the various external factors which cause him to worry and to be unhappy; but I show him the utter futility of merely worrying. I tell him that, if he thinks that worrying will improve matters, that he may go on worrying from morning to night and from night to morning, but such useless, purposeless worry only makes matters worse, and, indeed, very often is nothing but a habit, the same as "fussing" and getting angry is a habit, from which one can break himself or herself if he or she has a really earnest desire to do so.

One would be surprised to see what effect this commonplace, one might say platitudinous, little talk has. A goodly number of patients have told me that this was the turning point in their lives. And many go away firmly resolved not to worry, once assured that worry does no good, but simply to do the best they can. And this is already one good point gained.

The Treatment Proper

Having gained the patient's confidence and assured ourselves of his cooperation, we make an outline of the treatment proper.

In some rundown neurasthenics, the first thing to do is to put them to bed for a week or two and feed them up. This is almost a *conditio sine qua non*. Of course, where the patient cannot possibly afford this, we have to do without it; but the time treatment lasts so much longer, the results are so much slower in coming that we should do our utmost to convince the patient to take this preliminary rest; for the entire nervous system and the heart will take a good rest and the results of the other treatment will be so much more striking. The diet should be nutritious, but not stimulating. Alcoholics should be eschewed. Plenty of milk, eggs, and meat; but spices and condiments sparingly. While the patient is in bed, he should be given general massage, alcohol-rubs or cold-water spongings. If he cannot stay in bed, he should at least take the massage and the rubs.

After the patient has had his rest, hydrotherapy will play an important role. At first we may have to order warm baths only; but gradually the temperature of the baths should be reduced or the warm bath should at least be followed by a cold douche. A thorough dry-rubbing should follow each bath. At first the rubbing should be given by another person, but, as the patient gains in strength, he should attend to this himself; it gives him a certain kind of exercise.

Exercise is generally prescribed for all kinds of neurasthenic patients; however, in my opinion, exercise with dumb-bells and clubs in a closed room is of little benefit to neurasthenics. It often does more harm than good. Walking in pleasant and, if possible, new places is beneficial, but it must be done in moderation, being increased gradually; and fatigue is to be avoided, by all means. Driv-

ing or automobiling, sternly repressing any attempt of giving in to the crazy speed-mania, is very beneficial, but under no circumstances should the patient himself hold the reins or the lever. There must be no strain, and the driver or chauffeur must be so competent and reliable as not to give rise to any nervousness on the patient's part. Sea, river or lake bathing is positively beneficial. Of course, in the beginning a very strong surf must be avoided, and the patient must never be chilled. Bathing on cold, gloomy or drizzly days, therefore, is better taboo.

Genial Occupation and Environment

If the patient must work for a living and must stick to an occupation which is distasteful or even hateful to him, we are helpless. If the patient can afford it, though, he should select a congenial occupation; and more, if his means permit the time or the luxury of a hobby, he should be advised to indulge in it. It is even advisable to make him create himself a hobby.

Sometimes no measures will benefit a sexual neurasthenic until he has made a complete change of environment, climate or country. And there is no single measure so beneficial in sexual neurasthenia as is an ocean voyage; its effects are sometimes truly remarkable. I have known cases where an ocean-trip across the Atlantic and Mediterranean, with say, two weeks of traveling in Europe, brought about a complete cure both of the sexual neurasthenia and of the sexual impotence that was the result of it. And this without local or any other treatment.

If, however, there is anything that shows conclusively the necessity for individualization, individualization, and again individualization, in the treatment of sexual neurasthenia, it is the effect of ocean-trips. For just as an ocean-voyage is beneficial and indicated in properly selected cases, so it may prove injurious in improper ones. I have known patients who were very greatly injured by an ocean-voyage. If a man in an extreme stage of neurasthenia, unfamilar with any European language, goes to Europe alone, without wife, relative or friend, has a rough voyage, is perhaps deathly seasick, has no one to take a walk or to exchange a word with, then you cannot expect him to come home cured of his neurasthenia or the impotence. The likelihood is, that both will be aggravated.

Still, this fact does not militate against sea-voyages being one of the sovereign remedies in sexual neurasthenia. I will reiterate, though, that it must be ordered with discrimination, in properly selected cases, at the proper time of the year, and only, as a rule, to be undertaken in company with somebody —a loving and congenial wife or some congenial companion.

The Drug Therapy

The drug treatment of neurasthenia plays a secondary role, and what we said about drugs in the treatment of impotence applies with almost equal force here, except that we would emphasize the great value of strychnine.

Some consider strychnine *the* sovereign remedy in neurasthenia. Somebody has said, "what morphine is in painful conditions, strychnine is in neurasthenia." I give it here, the same as in impotence, in large doses, and frquently hypodermically. It is here that the compound syrup of hypophosphites, the compound glycerophosphates, lecithin, neuro-lecithin, and similar preparations prove signally beneficial. Arsenic often works wonders. The following simple combination is very good.

Arseni trioxidi.....gr. 1-30
Strychninæ sulphatis.....gr. 1-20
Calcii glycerophosphatis.....grs. 2
Massæ ferri carbonatis.....grs. 2
M. F. pil. vel caps. No. 1, D.t.d. No. 30.
Sig.: One t. i. d., p. c.

Lecithin (neuro-lecithin) is useful, and small doses of the thyroid and the adrenal glands sometimes prove singularly and mysteriously beneficial. Perhaps we have no right to use the word mysteriously, for there hardly is any doubt now that sexual neurasthenia, with all its symptoms, may be caused by some disease or deficiency of the thyroid gland.

One thing we must always remember in the drug-treatment of neurasthenia: to change the treatment frequently (if it be only the form—from solid to liquid or *vice versa*—or the vehicle) and to intermit every week or two for two or three days altogether.

The Veterans' Reunion at Gettysburg

A Sketch of the Medical Side, Written by One Who Was There

By RICHARD SLEE, M. D., Swiftwater, Pennsylvania

First Lieutenant, Medical Reserve Corps, United States Army; Chief Sanitary Officer, Third Division, Veterans' Encampment, Gettysburg, Pennsylvania

EDITORIAL NOTE.—The great encampment of the survivors of the battle of Gettysburg, held on the fiftieth anniversary of this bloody and decisive contest, has now gone down into history. The bringing together of these old and feeble veterans was a remarkable achievement—and especially remarkable for the tender care with which their physical needs were looked after. How they were saved from sickness and cared for when illness threatened them Dr. Slee tells us in this record of his personal experiences.

THE story of the great encampment of Union and Confederate veterans, held on the Gettysburg battlefield on the fiftieth anniversary of this decisive contest between the hosts of the blue and gray, has already been told by the newspapers and magazines. It is a thrilling chapter in our nation's history, one that must stir the heart of every true Amercan.

Yet, there is one phase of the encampment that hardly has attracted attention. I refer to the quiet, careful and efficient work of the Army Medical Corps, without which hundreds of those aged veterans would have succumbed under the unusual effort and excitement of this anniversary gathering.

Believing that the readers of THE AMERICAN JOURNAL OF CLINICAL MEDICINE will be interested in the arrangements made for sanitation and for the sick at Gettysburg, and to learn how these arrangements were carried to success, I have collected the following data, in part the record of my own experience; since I had the honor to be detailed as Chief Sanitary Officer of the Third Division.

The Medical Department of the U. S. Army, under the direction of Lt.-Col. Alfred E. Bradley, chief surgeon of the Medical Corps, was entirely responsible for the hospital equipment and the sanitary personnel of the great camp of veterans at Gettysburg from June 28 to July 10.

The personnel ordered by the War Department to handle this situation consisted of 25 officers of the regular medical corps, 24 officers of the Reserve Corps, and 239 enlisted men.

REGULAR MEDICAL OFFICERS, CIVIL WAR VETERANS' CAMP

Lieut.-Colonel Medical Corps

Alfred E. Bradley, Governors Island, N. Y., Chief Surgeon.

Majors, Medical Corps

Louis T. Hess, Fort Hamilton, N. Y., C. O. Prov. Field Hospital.

Christopher C. Collins, Fort Screven, Ga., Executive and property officer.

M. A. W. Schockley, Fort Niagara, N. Y., C. O. Prov. Ambulance Company.

Sanford H. Wadhams, Fort Porter, N. Y., C. O. Regiment Hospital No. 3.

Arthur W. Morse, Fort Barrancas, Fla., C. O. Regiment Hospital No. 1.

Paul C. Hutton, Fort Howard, Md., Sanitary Inspector.

Gideon McD. Van Poole, Fort Washington, Md., Asst. Sanitary Inspector.

William W. Reno, Fort D. A. Russell, Wyo., C. O. Field Hospital No. 1.

Perry L. Boyer, Madison Barracks, N. Y., C. O. Regiment Hospital No. 2.

Captains, Medical Corps

William L. Little, Fort Wadsworth, N. Y., Asst. Sanitary Inspector.

William H. Moncrief, Philadelphia, Pa., Adjt. Prov. Field Hospital.

William M. Smart, Fort Monroe, Va., Asst. Sanitary Inspector.

Harry S. Purnell, Ft. DuPont, Del., Adjt. Field Hospital No. 1.

John A. Clark, Plattsburg Barracks, N. Y., Surg. 5th Infantry.

Philip W. Huntington, Fort Totten, N. Y., Surg. Prov. Field Hospital.

John R. Bosley, Fort H. C. Wright, N. Y., Adjt. Prov. Ambulance Company.

Arthur N. Tasker, Fort Hancock, N. Y., Surg. Field Hospital No. 1.

Garfield L. McKinney, Fort Caswell, N. C., Asst. Sanitary Inspector.

Charles E. Doerr, Fort Thomas, Ky., Surg. Regiment Hospital No. 2.

Ralph H. Goldthwaite, Fort Hamilton, N. Y., Surg. Regiment Hospital.

First Lieutenants, Medical Corps

Raymond W. Mills, Plattsburg Barracks, N. Y., Surg. Prov. Field Hospital.

Howard L. Hull, Fort Terry, N. Y., Surg. Prov. Field Hospital.

James E. Baylis, Fort D. A. Russell, Wyo., Surg. Field Hospital N. 1.

Alvin W. Schoenleber, Fort D. A. Russell, Wyo., Surg. Field Hospital No. 1.

Order No. 1, issued on June 27, indicated the amount of work which the Medical Department had to assume in addition to the

Fig. 1. Field Hospital No. 1, Major William W. Reno, Medical Corps, United States Army, commanding. Red Cross nurses and officers shown in the foreground.

purely medical and surgical work in the hospitals and first aid stations.

HEADQUARTERS CIVIL WAR VETERANS' CAMP, SANITARY INSPECTOR'S OFFICE, GETTYSBURG, PA., JUNE 28, 1913.

1. The following assignments of personnel of the Sanitary Department is announced.

2. Assistant to Sanitary Inspector, Major Gideon Mc.D. Van Poole, M. C.

3. Sanitary Chief of 1st Section, east of Long Lane, and north of 5th Infantry Camp, Captain Wm. L. Little, M. C.

4. Sanitary Chief of 2d Section, west of Long Lane, north of Field bakery, and east of R. R., Captain William M. Smart, M. C.

5. Sanitary Chief of 3d Section, east of R. R., and south of 5th Infantry Camp, 1st Lieutenant Richard Slee, M. R. C.

6. Sanitary Chief of 4th Section, all west of R. R., Captain Garfield L. McKinney, M. C.

7. Sanitary Squad. The following noncommissioned officer and private will report to the Sanitary Inspector for duty, in his office.

Sergeant 1st class, Paul Compton, H. C.

Private George L. Richardson, H. C.

8. The following noncommissioned officers will report for temporary duty as assistants to the sanitary officer in charge of sections:

1st Section, Sergeant James A. Trembly, H. C.

2d Section, Sergeant Harry R. Cray, H. C.

3d Section, Sergeant Robt. L. Edwards, H. C.

4th Section, Sergeant Samuel Gatling, H. C.

9. Latrine-Squads. Each latrine-squad will consist of three (3) laborers and one (1) noncommissioned officer in charge, as follows:

1st Squad, Sergeant Hugh D. Johnson, H. C., Latrines 1-20, and Red Cross.

2d Squad, Sergeant Walter Lewis, H. C., Latrines 21-42.

3d Squad, Sergeant Alexander H. Weir, H. C. Latrines 47-59 and headquarters.

4th Squad, Sergeant Davidson W. Fleming, H. C. Latrines 43-46 and 60-73.

5th Squad, Sergeant Prentice H. Risley, H. C. Latrines 74-84.

1st Latrine-Squad will report to Captain William Little, M. C.

2d Latrine-Squad will report to Captain William M. Smart, M. C.

3d Latrine-Squad will report to 1st Lieutenant Richard Slee, M. R. C.

4th and 5th Latrine-Squad will report to Captain Garfield L. NcKinney, M. C.

10. Police-Wagons. Each police-wagon to have two (2) laborers, and one (1) private 1st class or private, H. C., in charge under direction of the Sanitary Inspector of the section to which assigned as follows:

1st Section, Wagon No. 1, Private 1st class Emile Bossey, H. C.

Wagon No. 2, Private William J. Groig, H. C.

2d Section, Wagon No. 1, Private 1st class, William W. Pearce, H. C.

Wagon No. 2, Private Frank A. Hannah, H. C.

3d Section, Wagon No. 1, Private Webter T. Price, H. C.

Wagon No. 2, Private Charles H. Kellner, H. C.

4th Section, Wagon No. 1, Private 1st class, Moll F. Scott, H. C.

Wagon No. 2, Private Frederick C. Thompson, H. C.

11. Supply Department. The following noncommissioned officer and privates are assigned to this department:

Sergeant L. Wood, H. C.

Private 1st class James Phelps, H. C.

12. Disinfecting Squad. The following noncommissioned officers and privates are assigned to this squad:

Sergeant Brent A. Lemert, H. C.

Private 1st class, Charles Gelling, H. C.

Private 1st class, Archie C. Petterson, H. C.

(Signed) PAUL C. HUTTON,
Major Medical Corps, U. S. Army, Sanitary Inspector.

First Lieutenant Thomas E. Darlington, Medical Reserve Corps, was subsequently detailed as Assistant Sanitary Inspector in charge of disinfection.

Memorandum for Sanitary Chiefs of Sections

1. Night-Cans. Contents of night-cans 1st and second Sections will not be emptied into latrines, but will be burned in large rock pit urine crematories across R. R. from Q. M. headquarters, or carted away from the camp. Contents of night-cans 3d

and 4th Sections may be emptied into latrines if capacity of latrines will allow it. After emptying night-cans the interior will be burned out by firing a small amount of straw and an ounce or so of crude oil, if handy.

2. Disinfecting Squad. The disinfecting Squad will be assigned a wagon with 2 disinfecting sprays of phenol compound.

3. Sanitary chiefs of sections are responsible for all general and special police as well as for the sanitary condition of their sections.

4. Tin cans and ashes will be hauled to the dump north-west of Ambulance company, near R. R. on High Street. All refuse solid and liquid, will be disposed of in rock pit crematories near kitchens. Cesspools near kitchens will not be utilized without special authority from the Sanitary Inspector. Should a rock-pit crematory become crippled by overtaxing with liquids, proper steps will be taken immediately by the Sanitary personnel to put the incinerator in operation.

(Signed) PAUL C. HUTTON,
Major, Medical Corps, U. S. Army, Sanitary Inspector.

Medical Reserve Corps

The great value of this organization was for the first time practically demonstrated.

Sufficient officers from the regular establishment were not available to meet the emmergency of handling the medical problems of this great camp, and the War Department, therefore, called into active service twenty-four Reserve Corps officers.

These men were detailed in all capacities, under the supervision of the regular officers on duty. The training which they received, it is believed, will prove invaluable, and it is to be hoped that each year may see the active work of these Reserve Corps officers become more extended and more practical. As civilian practitioners they are all well equipped and competent, and, with the necessary military training, they must become a most valuable auxiliary to the regular establishment.

LIST OF MEDICAL RESERVE CORPS OFFICERS, CIVIL WAR VETERANS' CAMP.

First Lieutenants Medical Reserve Corps

Thomas Darlington, N. Y. City, Asst. Sanitary Inspector.
Richard Slee, Swiftwater, Pa., Asst. Sanitary Inspector.
William W. Vaughn, Ft. Myer, Va., Surg. 15th Cavalry.
H. Sheridan Baketel, N. Y. City, Field Hospital No. 1.
George C. Beach, Jr., National Soldiers' Home, Hampton, Va., First Aid Station. No. 2.
Walter M. Brickner, N. Y. City, Regimental Hospital No. 3.
Henry C. Coe, N. Y. City, Prov. Field Hospital.
Walter S. Cornell, Philadelphia, First Aid Station No. 5.
George S. Crampton, Philadelphia, Prov. Field Hospital.
Meyer M. Eckert, N. Y. City, First Aid Station No. 8.
William E. Fitch, N. Y. City, First Aid Station No. 8.
Howard Fox, N. Y. City, Regimental Hospital No. 2.
Harold M. Hayes, N. Y. City, Regimental Hospital No. 2.
Howard Hume, Washington, D. C., First Aid Station No. 10.

Fig. 2. Medical Reserve Corps officers on duty at Gettysburg. This camp was the first one in the history of the Reserve Corps in which an emergency existed, necessitating the calling into active service of a number of these officers to supply a deficiency in the regular establishment, and this is the first group picture taken of a group of United States Medical Reserve officers on active duty.

Arthur R. Jarrett, Brooklyn, N. Y., Regimental Hospital No. 3.
George C. Kieffer, Philadelphia, Pa., First Aid Station, No. 4.
Joseph V. Klauder, Philadelphia, Pa., First Aid Station No. 11.
David A. Kraker, Newark, N. J., First Aid Station No. 1.
Walter E. Lee, Philadelphia, Pa., First Aid Station No. 7.
William S. McGill, N. Y. City, First Aid Station No. 3.
Charles B. J. Mittelstaedt, N. Y. City, First Aid Station No. 6.
Mayer M. Stark, N. Y. City, Regimental Hospital No. 1.
S. Meredith Strong, Brooklyn, First Aid Station No. 6.
Reynold W. Wilcox, N. Y. City, Field Hospital No. 1.

The American Red Cross Society

The American Red Cross Society, under the able direction of Major Robert U. Patterson, Medical Corps, U. S. A., was a most efficient auxiliary, operating fourteen rest and first aid stations on the battlefield park-roads, outside of the camp proper.

During the period of the encampment, 845 cases were treated, 71 of these being transferred to hospitals. Shelter, rest, and comfort was administered to 10,695 persons. There were on the grounds 71 Red Cross Nurses, distributed at the various rest-stations, and shelters. Included in this number, were 26 Red Cross Nurses, assigned to duty with the camp field-hospitals, where they did most excellent work.

The Red Cross, under its present methods, working hand in hand with the military authorities, with its proper status established, so as to avoid duplication of efforts and conflict of authority, is a most efficient, energetic, and splendidly equipped coworker for suffering humanity.

Headquarters of Red Cross, Civil War Veterans' Camp

Memorandum For The Chief Surgeon

Personnel: 1 major, M. C., U. S. A.; 71 nurses (female); 10 doctors; 72 boy scouts; 33 miners; 10 chauffeurs, with cars; 11 cooks, waiters and laborers, making a total of 208.

This force operated 14 rest and first-aid stations at important historical points on the battlefield; 26 nurses were furnished to Field Hospital No. 1, U. S. Army, and Provisional Field Hospital, U. S. Army. The remainder of the personnel operated the rest-stations.

Date	Cases ill enough to require active treatment.	Sick transferred to Field or Civil Hospitals.	Cases receiving rest, water, bouillon, etc.	Total.
July 1	186	19	742	928
July 2	276	38	4006	4282
July 3	295	12	4391	4686
July 4	88	2	1556	1644
Totals	845	71	10695	11540

The table shows the work done at the 14 aid stations during the period July 1 to 4, inclusive.

Fig. 3. Type of rock-pit incinerator used for the destruction of contents of night cans and camp refuse. Three of these incinerators, each about 12 feet in diameter and 4 feet deep disposed of all this material, from the entire camp, each day.

Boy Scouts

One of the most remarkable demonstrations of efficiency, as secured by well-thought-out practical instruction and discipline, was demonstrated by use of the Boy Scouts.

More than 600 of these youngsters participated in the conduct of this great camp, and the startling results fully justify the feeling that in the Boy Scout movement of this country we have one of the most valuable organizations for the maintenance of patriotism, obedience, respect, and discipline. It was an interesting sight during the first day or so of the camp to see companies of these youngsters marching from various trains

with the precision of veterans and taking up their stations here and there throughout the camp, with an evident sense of the responsibilities they were about to undertake.

The writer must confess that previous to his observations at the great camp of Gettysburg he had considered the Boy Scout movement as perhaps a desirable thing, from a boy's viewpoint, but in reality not a very practical one. He did learn however, as did every other officer on duty during the trying days of camp life, to appreciate what a really remarkable organization they constitute.

Looking back over the work, it would have been almost impossible to have carried out successfully many of the details without the aid of these boys. They were useful in every capacity one could possibly think of—as orderlies in hospitals or messengers in connection with the various offices; or to man the ambulances, thus releasing medical officers for more important duties in the various hospitals. They independently manned first-aid stations, in connection with the Red Cross work, throughout the outskirts of the camp and on the surrounding battlefields; they acted as flagmen, by day and by night, on the dangerous crossings of the railroad; as guides and messengers for the enfeebled veterans; and in every useful capacity did they willingly, courageously, and thoroughly demonstrate the efficiency of the organization.

Everywhere did I hear praise, and almost incessantly was the request made for more Boy Scouts. It is to be hoped that the Washington authorities may take cognizance of the tremendous import of the movement and in some practical way encourage and foster the spirit and interest of this work.

Fig. 4. United States Army field bakery in operation. This bakery, apparently without the slightest trouble, baked all of the many thousand loaves of bread required to feed the veterans in this immense camp.

Disposal of Garbage and Camp Waste

The bane, heretofore, of all camps, whether large or small, has been the prevalence of flies. Not only is the annoyance from these pests great, but their unquestionable role in the conveying of the infections of typhoid fever and other diseases makes their presence in a community of the most serious import.

Therefore, the disposal of kitchen waste and human and animal excrement, right from the commencement of the encampment, was a most pressing problem. To feed the large number of men gathered there were provided 95 kitchens. These kitchens were arranged in rows, at the head of the company streets and on cross avenues, so as to be convenient for supplying the necessarily large amount of food and to be ready of access at meal times.

Kitchen-incinerators were provided, one for each two kitchens. These incinerators were of the pit type, rock-lined. They were about 5 feet wide and 6 to 7 feet long, the bottoms sloping from the level of the ground at one end to a depth of about 18 inches at the rear, and the bottom, two sides and rear end walled up with stone to the surface of the ground.

These incinerators were of sufficient size to dispose properly of the waste from one company, whereas, as events showed, they were called upon in many instances to dispose of kitchen waste corresponding in amount to that which would be obtained from the feeding of two full regiments.

In addition to disposing of all the solid garbage, there were immense quantities of kitchen-water, and so on, to be evaporated, the nature of the soil being such as to preclude the disposal of any by absorption. In spite

Fig. 5. Provisional ambulance company, Major M. A. W. Schockley, Medical Corps, U. S. Army, commanding.

of the fact that these incinerators were wholly inadequate for the work imposed upon them, the seemingly impossible was accomplished, and all garbage and practically all of the kitchen waste-water was handled in them.

It required a tremendous amount of exertion on the part of the sanitary personnel to obtain these results, but it was a striking example of what can be accomplished in an emergency.

Work of the Latrine Squad

The toilet accommodations consisted of 90 latrines, with two urine-troughs each; the total seating capacity of these being 3476. These latrines consisted of board walls, with flat, tarred-paper roofs, with ample air space between the roof and the side walls.

Two pits were dug in each enclosure to a depth of 6 feet, where the ground water permitted. They were about 20 feet long and about 4 feet wide. The seats were arranged in two rows, and were of the box form, with hinged lids.

Each morning, latrine-squads visited the latrines. The box-covers were tilted back, any refuse was brushed into the pits, and the contents were then liberally sprinkled with straw and crude oil. These were then fired, and as soon as the flames had died down sufficiently so as not to endanger the wooden seats, these large boxes were slammed back into place, so as to include as much as possible of the dense smoke under the covers.

In addition to this, lime and crude oil were liberally used in the urinals. This very simple procedure, carried out systematically day after day, kept these latrines in an agreeable and sanitary condition. At no time, in spite of the large numbers of men in camp, and with the prevailing intense heat, was there anything disagreeable in connection with them.

Flies were noticed only by their absence; and, as showing how this condition was appreciated by the veterans, I include a paragraph of a letter from one of these men:

"On the 3rd of July, we missed one of our number, an old Welshman, 76 years old, with a broken leg, a bent body, supporting himself with a cane. We could not find him in any of the hospitals, nor could the boy scouts find him. As he was a sober man, the puzzle was great. Finally one of our mess found him sound asleep in one of the latrines. He said it was a cool place; no flies there!"

There still remained to be disposed of 240 night-cans of refuse and urine. These were large galvanized covered cans, placed at intervals throughout the company streets, for the purpose of collecting the night urine and other refuse.

These cans were collected each morning by teams, and were deposited at the central incinerator plant, which consisted of 6 regular pit incinerators, from 10 to 14 feet in diameter, and about 4 feet deep, placed in the center of the camp.

These central incinerators certainly justified the dependence which the Army Medical Department places on this form of incinerator for the handling of camp-garbage, and only three were in operation at one time. As high as 2500 gallons of water-soaked sludge was consumed in one single incinerator in one day.

Largest American Encampment

This encampment on the old battlefield of Gettysburg, in commemoration of the 50th anniversary of the battle, extending from June

28 to July 6, was the largest encampment ever held on the American continent, and afforded an opportunity to test the sanitary methods and plans of the Medical Department of the U. S. Army on a scale never before offered.

Dealing with trained soldiers and in relatively small numbers, our sanitary methods have been very successful, but in the Gettysburg encampment the authorities were confronted with the overnight establishment of a city of more than 6000 tents, with 55,000 civilian residents—people who were undisciplined, and many of whom were greatly handicapped by the disabilities of age, injuries, and disease.

In anticipation of this encampment, the Quartermasters' Department, under the most remarkable supervision of Major Normeyle, was in preparation for several weeks.

The camp was located on ground lying south of Gettysburg, between Confederate Avenue on one side and the Emmettsburg Road on the other, and its southern boundary including portions of the ground covered by Pickett's famous charge.

From a sanitary viewpoint, it was about as unfavorable location as could be selected for a fixed camp. The soil was of a dense clay, or adobe, practically impervious to moisture, although in the digging of our pits for the latrines sub-surface water was frequently encountered at a depth of about three feet. This clay soil rendered it impossible to dispose of waste water except by evaporation on the incinerators or by drainage through ditches, and, as the country was very flat, the drainage, of necessity, was very poor.

The intense heat and previous drouth converted the surface of this camp into an impalpable dust, which was very annoying at times, and which became a tenacious, sticky mud on the several occasions when we had showers. There were practically no trees to afford shade, except on one border. There was no safe water supply. Therefore, three deep wells were driven and an abundant supply of water piped to all portions of the camp, so that everybody had free access to it.

Notwithstanding these and many other difficulties, the encampment, from the commencement to its close, was most successful in every particular, and the thousands of old veterans who were present were loud in their praise and expressed continual astonishment at the methods now in vogue as compared with those with which they were familiar during the trying period of the Civil War.

They would stand in interested groups, watching the disposal of the refuse in the incinerators and the many other details in connection with camp life, and the sanitary advancement of the general country which is sure to be awakened by these returning veterans will of itself justify the necessary large expenses of this undertaking.

Fig. 6. The writer in his Ford runabout. The experience of this great camp, many miles of which the assistant sanitary chiefs had to cover each day, demonstrated the value of the automobile in military work of this character. This little car covered hundreds of miles during the life of the camp, without a hitch, except one puncture.

Hospital and First-Aid Stations

The Medical Department of the Army had entire charge of all hospitals and first-aid stations within the confines of the camp.

It was expected that about 55,000 veterans would participate in the reunion. However, all these men were of advanced age, the average being above seventy years, and so, considering in addition the intensely hot weather in prospect, the long journeys on uncomfortable trains many had to take, the changed diet, the unavoidable exposure, and then the exhaustion incident from it all, it was decided that hospital-beds for the accommodation of at least one thousand men should be provided.

Having this in mind, two field hospitals, with a normal capacity of 108 beds each and

three regimental hospitals with a normal capacity of 9 beds each were established, besides additional equipment that allowed an extension of the field-hospitals to 412 beds each, and to 100 beds for each regimental hospital; making a total of 1124 beds. In addition to these hospital accommodations, 11 first-aid stations were established in various portions of the camp, for the purpose of affording prompt aid, each being in charge of a medical officer aided by Hospital Corps men as assistants and attendants.

All of the hospitals and first-aid stations were open day and night and the following table gives a summary of the amount of work done. Aside from those admitted to the hospital, 8397 patients received treatment for minor ailments.

The mortality was small, only 9 deaths occurring during the entire encampment, and the causes of death were, respectively, as follows: cardiac dilation, 2; apoplexy, 2; heart failure, 1; asthenia, 1; heat-prostration, 1; exhaustion, 1; uremia, 1.

Nothing, surely, can more graphically portray the thoroughness of the measures adopted by the Medical Department of our Army, and their efficiency, than do the figures here presented.

To handle 55,000 old men under the conditions obtaining, and then have to record a total mortality of but 9 campers, and only

	Cases admitted to hospitals	Cases treated but not admitted to hospitals	Sent to hospitals from first-aid stations, etc.	Total of cases	Discharged from hospitals	Transferred to hospital-train, State of Pennsylvania	Died
Provisional field-hospital	353	640	...	993	340	8	5
Field-hospital No. 1	222	1075	...	1297	211	8	3
Regimental hospital No. 1	73	293	...	366	72	..	1
Regimental hospital No. 2	76	781	...	857	76	..	..
Regimental hospital No. 3	20	1042	...	1062	20	..	..
Fifth infantry infirmary	...	564	18	18	564	..	..
First-aid stations (11)	...	4002	420	4002	...	..	..
Red Cross stations (14)	...	845	71	845	...	..	..
Totals	744	9242	509	9986	719	16	9

Fig. 7. Group of Confederate veterans waiting their turn for a drink at one of the bubbling fountains. The water supplied was from driven wells, and was of the utmost purity and clearness. The water was cooled by ice.

16 cases in which transference of the patients to civil hospitals was necessary at the termination of the encampment, surely is an accomplishment that will ensure this camp's passing into history as a marvel.

Provisional Ambulance Companies

Under the command of Major M. A. W. Schockley, Medical Corps, U. S. A., there was organized a provisional ambulance company, by the assembly of ambulances from the various posts of the Eastern Department; 12 ambulances with 48 draught-mules and 11 riding horses, besides 2 automobile ambulances from the Walter Reed General Hospital, of Washington, D. C., forming this company.

During the most trying days of this encampment, these ambulances were kept almost continuously on the go, responding in all to 741 calls and transporting 1100 patients.

The splendid work done by this provisional ambulance company was a demonstration of the remarkable state to which the various units of the Medical Department of the Army have been brought.

In addition to the thorough medical organization of the U. S. Army and of the Red Cross, in the camp proper and scattered throughout the battlefield drives, the Pennsylvania State Department of Health, under the efficient direction of Dr. Samuel G. Dixon, Commissioner of Health, made ample preparation in the town of Gettysburg and the immediate vicinity for the handling of such sick or injured persons as might present themselves. An emergency hospital was established, and numerous first-aid and comfort stations opened. In addition to these, the Pennsylvania State Board of Health's hospital-train was in readiness for the removal of patients to base hospitals at Harrisburg and other points in case the local accommodations should become overtaxed.

The work of Dr. Dixon's department was carried out with skill and forethought, in harmony with the army officers, in all directions and in handling all cases occurring outside of the camp to which the activities of the regular army officers were confined.

I question whether there is a state board of health in this country as well equipped, organized, and administered as that under the direction of Dr. Dixon, as practical demonstration proved.

Other departments of the Army, notably the quartermaster's department, subsistence department, signal corps, engineer corps, and the rest, all deserve highest praise for the manner in which they were conducted.

This article is intended primarily as a description of the medical problems, and how handled, and I cannot enter into details in connection with these other very important branches of the service. It would not be fair, however, to neglect to mention them, considering the tremendous amount of work which they all performed and which was so absolutely necessary.

In Conclusion

To have been an active participant in this great event, is no small honor, and I believe every medical officer, regular as well as of the reserve, was impressed with this fact.

Space will not permit of any extended report of the thousand and one interesting events that came under our notice, but I cannot close without a few personal observations concerning those who made this camp, from a medical, no less than from a sanitary point of view, a success and assured it a place in history.

Fig. 8. Group of sanitary officers. Front row, left to right: Major Paul C. Hutton, Chief Sanitary Inspector; Lt. Col. A. E. Bradley, Chief Surgeon; Major Gideon Mc D. Van Poole, Assistant Sanitary Inspector. Rear row, left to right: Lieut. Thomas Darlington, Assistant Sanitary Inspector, chief of disinfection; Captain Wm. T. Little, Assistant Sanitary Inspector; Lieut. Richard Slee, Assistant Sanitary Inspector; Captain Wm. M. Smart, Assistant Sanitary Inspector; Captain Garfield S. McKinney, Assistant Sanitary Inspector.

I am without information as to the methods by which Surgeon-General Torney selected the regular medical officers detailed to this camp. Suffice to say, however, that his method was perfect, and not a single man was selected who lacked in the least degree the necessary qualifications necessary to make his especial detail a success. Every department, without exception, ran like clockwork and more than accomplished the work assigned to it; and I am convinced that, could every civil practitioner participate personally in some such event, he would return to his regular occupation with an extended view and experience that would astonish him, make him spread his shoulders and thank God that there is a service known as the Medical Department of the United States Army.

Our Chief-Surgeon, Lt.-Col. Alfred S. Bradley, every inch of his more than six feet a soldier and a man's man, is the ideal of an

officer, medical or of the line, always on duty, always accessible to all. Never for an instant during this trying period did I see him ruffled, and always was in evidence a kindness of heart in keeping with his physique. Escorting him around, as I did, in my little car, in the small hours of the night, to visit the dead, the sick in the hospitals, to direct the lost veteran to his tent, to do deeds of kindness, I realized why every last man was willing to work hard and to work every hour of the twenty-four if there be need. I count it an honor to have served under Lt.-Col. Bradley; and should events again call us into the field, I hope good fortune may place me under his command again.

Fig. 9. Lt. Col. Alfred E. Bradley, Chief Surgeon; Major Paul C. Hutton, Chief Sanitary Officer. On these two officers fell the brunt of the sanitary work of the great camp and the results speak for their unusual qualifications.

Major Collins, our executive officer, worn and thin, just has come out of the Walter Reed Hospital, convalescent from a serious and painful illness. Most men would have applied for continued sick-leave. Not so he, however. Right on the job every minute, courteous, kind, his southern blood would not let him be otherwise. To be executive officer of a camp of this size is a big-man's job, and Major Collins filled it.

Major Paul Hutton, our chief sanitary officer and my immediate superior had just returned from weeks of strenuous work succoring the sufferers from the Ohio floods and down the Mississippi Valley, a combination of highly tempered spring-steel and whalebone, keeping up all this tremendous energy on less than four hours' sleep in the twenty-four; for to his work and direction were due the splendid sanitary results.

If there was any one man in camp to whom I might owe a grudge, Hutton is the man, turning us out, as he did, at 4:30, or earlier, every morning to start work, and keeping us at it till sundown or later; detailing me for the three hottest days, when the temperature registered 103½ degrees in our hospital tents, to stand over the crematory fires, when even hospital-corps men keeled over. Under the circumstances, one would forgive me for an unkindly feeling, but I have none, nothing but admiration and regard.

Then there were my immediate coworkers and fellow slaves, Major Van Poole and Captains Little, Smart, and McKinney, and Lieutenant Darlington. I naturally saw a great deal of these messmates of mine, especially as we were so intimately associated in the sanitary conduct of the camp; and I count it as one of the greatest privileges to feel that acquaintanceships there made will ripen into lasting friendships. Work of this character brings out the real man, and I value the opportunities of meeting these fine fellows under such conditions more than I can express.

Outside of our little "family circle," of sanitary workers, clusterd about the Chief Surgeon, were many splendid men. Majors Louis T. Hess, commanding provisional field-hospital; Reno, Field Hospital No. 1; Wadhams, Regimental Hospital No. 3; Morse, Hospital No. 1; Boyer, Hospital No. 2; Schockley, in command of the Ambulance Company; and so on, through the list, each one and all are fit topics for separate chapters.

Anesthesia: A Résumé of Fifteen Years Administration of Anesthetics*

By A. S. TUCHLER, M. D., San Francisco, California

IN THE administration of anesthetics covering a period of fifteen years, I have come to the conclusion that chloroform is the safest and the best anesthetic, and the easiest to administer.

In order that you may obtain the results mentioned, first gain the confidence of your patient. After a careful examination and an assurance that all will be well if he will breathe naturally and do as directed, you have greatly overcome the dread and nervousness preceding an operation. A half-strength H-M-C tablet is given hypodermically one hour before the operation, and another H-M-C tablet —this time full-strength—is administered while the patient is on the operating-table just previous to beginning to operate. I have noticed that those of the blonde type may not need the second hypodermic; in fact, one full-strength H-M-C tablet may be sufficient in the first place in these individuals. if they be light in weight or debilitated subjects.

If the patient is anemic or weak, 1-30 grain of strychnine sulphate should be combined with the above tablet. This will prevent shock or collapse after the operation is completed, especially should this be prolonged.

The Use of Oil of Orange

Previous to the administration of chloroform, a few drops of the oil of orange is dropped on the Esmarch mask, which previously has been covered with about four layers of gauze and is being held about one inch from the face. Abrams found that "this oil administered before ether anesthesia will prevent or lessen subsequent nausea and also the patient will require less of the anesthetic." It will also overcome the terror most people have of chloroform and will assist in bringing the patient more quickly under its influence.

Chloroform should be dropped on the mask at the rate of about 60 or 70 drops in a minute. The patient is told to breathe naturally and go to sleep, and this suggestion should be repeated several times. Have the patient breathe both through nose and mouth at first. It will be noticed that when the stage of complete anesthesia has been reached, mouth-breathing as a rule prevails. Do not push the anesthetic; it must be administered cautiously and slowly. Do not watch the operator, but give the patient your whole attention. After a few minutes, when the patient comes under influence, the mask may be lowered, but never should be placed directly on the face.

There will be no excitement stage, or but of slight degree, owing to the action of the H-M-C. The pupil will not be influenced by the anesthetic, and contraction will not take place, as is the case when H-M-C is not given.

Complete anesthesia will be manifested by the loss of muscular contraction, a snoring respiration, and the abolition of ciliary reflex. You can assure yourself that the patient is under complete surgical anesthesia and this reflex abolished, by gently raising the upper eyelid and touching the lashes. Do not touch the eyeball.

Suspend the administration of the anesthetic until the breathing becomes natural again, when a few drops only will be required occasionally to keep the patient asleep; in many cases the suggestion to go to sleep being sufficient. One-half to four drams of chloroform usually will suffice for an operation last ing from one to three hours or longer.

Watch the Pulse

The pulse must be closely watched—not necessary to count it. Should it become small or wiry or show tenseness, then strychnine sulphate, 1-30 grain hypodermically, may be given. This may be repeated during the operation, if it be prolonged. In a case where a large fibroid tumor was removed, I found it necessary to give 3-30 grain of strychnine during the operation, besides oxygen and the change to ether. Do not be afraid to give strychnine when it is indicated during the operation. It will help to prevent shock and collapse.

When an operation is prolonged, it may be necessary to change to ether. This should

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* Read before the State Eclectic Medical Society, May, 1913, at San Francisco, California.

be dropped on the same mask about three times as fast as chloroform, holding the mask one-half inch from the face, so as to give the patient plenty of air.

It seem brutal to me when I see a helpless patient has his wind shut off by the ordinary ether-cone clapped over the face and ether poured on until the patient becomes blue or cyanotic. This brutality is a dangerous procedure and entirely unnecessary. Many a patient has been lost through it, postoperatively, from shock, owing to lack of aeration and subsequent congestion of the lungs. The common expression that "the operation was a success, but the patient died" usually can be traced to the careless or improper administration of the anesthetic.

Chloroform or ether, either is perfectly safe when administered correctly and carefully. Usually to the inexperience or the carelessness of the anesthetizer can be attributed any unfavorable or fatal results, often due to shock and collapse because too much of the anesthetic has been employed in that case.

No set rule can be laid down, however, to govern every case. The successful administration of an anesthetic requires the very best judgment. Timidity or bad judgment on the part of the anesthetizer is most likely to result in an imperfect or too profound narcosis, death on the table or postoperatively. When Morton, the discoverer of ether anesthesia, administered that drug to a patient, he did not watch the operation, but gave his whole attention to the patient, therefore his success with its administration. Others may well imitate him.

Care During Prolonged Operations

During a prolonged operation, should the pulse become weak or wiry or the patient pale or cyanotic, then stumulants, such as strychnine, glonoin, sparteine or brandy, or normal salt solution, hypodermically, are indicated.

It is my custom to have two rubber bags filled with warm water and placed on each side of the chest and kept warm during the entire operation, or having the operating-room warm, about 70°F; also having any exposed portion of the patient covered with blankets so far as possible, so as to prevent the surface from being chilled. Thus, the patient is kept warm while on the operating-table, and this will help to insure a successful termination of the operation.

I cannot too strongly impress the necessity of seeing to it that the patient has an extra covering of heavy woolen blankets before he is removed from the operating-room, since usually the halls are cold and drafty. I have seen many a successful operation end disastrously to the patient by way of the pneumonia route, owing to a lack of just this little precaution.

By carefully observing the foregoing details, the anesthetizer need have no fear of having any calamity befall the patient. There will be no anesthetic or any surgical shock, nor will there be any story to tell that the patient took the anesthetic badly, nor will there be any sequels, such as pneumonia. The patient will awaken from his sleep an hour or two after the operation, usually without vomiting, and ask why the surgeon has not begun.

This experience is the result of about fifteen years of the almost daily administration of chloroform or ether, without having had any serious accident or fatality. Complete anesthesia was obtained in from three to five minutes. The duration of the anesthesia was from one-half to four and one-half hours; the patients ranging from early infancy to extreme old age and some complicated with hypertrophy or valvular disease of the heart. The operations comprised minor as well as the most complicated abdominal and other major ones.

Conclusions

From the foregoing, the following conclusions are arrived at:

1. Chloroform and ether are perfectly safe as general anesthetics.
2. Drop either anesthetic in the mask, giving the patient plenty of air.
3. Have the patient breath both through the nose and mouth; the latter prevails when the full anesthetic stage is reached.
4. Keep the patient warm while he is on the operating-table; cover him up with an extra blanket before his removal from the operating-room.
5. Do not place the finger on the eyeball in order to determine the extent of the anesthesia; gently touching the eyelashes on the upper lid will determine any reflex movement and make known the extent of the narcosis.
6. Keep strict guard of the patient entrusted to your care, and do not watch the operation.
7. Observe the danger-signal—when the breathing begins to become stertorous or snoring, then suspend the administration of the anesthetic and remove the mask from the face.

Vaccine Therapy and Homeopathy*

By JOHN BESSON, M. D., Portland, Oregon

EDITORIAL NOTE.—Some months ago we expressed wonder that more of our Homeopathic brethren had not made use of the wonderful popularity of bacterin-therapy to emphasize the claims of the peculiar law of their school, "Similia similibus curantur." Dr. Besson was quick to take this up, as the following article demonstrates.

HUMANITY notoriously respects the opinion of the other fellow, and is always off with the old and on with the new. We should, therefore, thank our management for the timely title of this Bureau, which in itself should insure attendance and attention to a marked degree. Until the receipt of the program a few days ago, I had looked forward to appearing before a poorly attended Materia Medica Bureau, the papers there presented being all too often respectfully tolerated, with the secret hope that there may be but little and very short discussion.

It has been suggested that I prepare a paper on "The Homeopathicity of Vaccines"; but I have refrained from giving a title to my subject, thinking that a better one would be, perhaps, "Up-to-date Therapeutic Philosophy," and then, again, nothing appeals to me but "The Vindication of One Samuel Hahnemann." There was a scientist for you, and, like so many others, he labored before the time was ripe, yes, a hundred years before the world was ready or was able to appreciate. You have heard that often enough, and it is a rather vacuous statement; unless, indeed, you analyze and compare the radical suggestions of the man of 1810 with the status of present-day therapy. If you do that, then you will realize that, while many of us have accepted his truths, trustingly followed his path and clinically reaped the benefits, only today has medicine the brains to comprehend the law of cure.

Hahnemann told the story of vital force and its vicissitudes—"Raise it to par, and disease is no more." But his mere sayso, together with his "try it and publish your failures to the world," was not proof sufficient for those who would not see. Wright dubbed vital force "opsonic index," then went one step further than Hahnemann, by proving its variations, and today there is a proved reason for the activity of curative agents.

I'll say to you here that, other than the various electrical and mechanical therapeutic measures so highly perfected, and—setting aside the germicidal method of cure, perfected possibly in the effort at one great sterilization of the patient, as per Ehrlich—there is no means so potent as the use of bacterins. Also, here is the only real "regular" therapeutic point infringing upon the homeopathic field.

The one controversy lies in the apparent efforts of nature in response to the stimulus offered, either by the properly selected drug or by the bacterin, and our ideas as to the *modus operandi* and intent of these efforts.

To clear up this question, we must stop for a consideration of curative agents, their sources, the methods of their selection, and, most simple, today, their mode of action.

As curative agents, we will consider only *antigens*.

An antigen is something which, when placed or taken into the body, stimulates antibody formation of a particular variety.

The first requirement of any antigen is similarity. Mark that, please, as the bomb-shell in this paper; the point of points. The antigen must be the similium. Something which is nearest to that something causing the disease, and, yet, without being identical, is the prime requisite in determining a measure that will act curatively; act by aiding nature to cure; that is, one which will offer the necessary prod to nature, which then proceeds to raise its own opsonic index.

The bacterin is the typical antigen.

How Bacterins Cure

First of all, what is a bacterin? It is a suspension of a number of killed bacteria—no longer a disease-producing agent, but now a remedy, when properly selected. And, to cease generalizing, I will here cite a specific instance in that of typhoid infection. Five hundred million of the *dead* typhoid bacilli

*Paper read before the Bureau of Serum and Allied Therapy of the Oregon Homeopathic Society, at Portland, Oregon, October 24, 1912.

forced into your system will not produce the disease. They will stimulate your organism to form typhoid antibodies, beginning with about the eighth day after inoculation; a fact which has been demonstrated many times. According to Callison (who quotes much from Major Russell and others), "corresponding to the time of development of antibodies in prophylactic vaccination, in the first eight or ten days of an attack of typhoid, there is a constant increase of temperature and aggravation of all symptoms. With the decline of the temperature to normal, there is an increasing quantity of antibodies present in the blood, which may be demonstrated for long periods thereafter."

"From this correspondence in time between the clinical symptoms and the antibodies, in an attack of typhoid fever, and the development of antibodies and immunity in prophylactic vaccination," Callison says, "it seems only proper to assume that recovery from typhoid and the development of immunity in prophylactic vaccination are brought about by a similar mechanism, and that the prophylactic vaccination is an artificial, controlled process, which occurs naturally in an attack of the disease." He then asks: "Can this artificial, controlled procedure be applied in the treatment of typhoid?"

Compare With the Teachings of the "Organon"

Did any among you ever before hear of an "artificial," possibly a drug-produced, "controlled procedure" being applied in the treatment of morbid processes? If not, please consult your "Organon." Long after the writing of that monumental work opsonic indices have been raised by drugs homeopathically selected and the fact scientifically demonstrated at Ann Arbor, Boston, and other places.

Do you know that eighty percent of volunteers in the Spanish-American War and twenty percent of regulars contracted typhoid fever (almost impossible of comprehension); that in the past three years there have been but twelve cases of typhoid fever in our army, without one death—and that under exposure, too, along the Texas border and in towns where many people died of the disease? And, just as certainly as the typhoid antigen confers immunity from the disease, may you grant the belladonna-child immunity to a typical belladonna scarlet-fever.

That, of course, has been proved only clinically. But could you desire more proof of the immunizing effect of a similar drug than the fact that some persons are so susceptible to rhus poisoning as to develop an attack year in and year out, irrespective of contact; and, that among 3000 employees at a summer-park in Philadelphia, through a period of ten years, there had not been one failure to establish immunity in all previously susceptible cases by two drops of the tincture of rhus toxicodendron in water three times daily?

The fact here stated is attested to by Dr. J. C. Attix, professor of chemistry, radiology, etc., at Temple University, in Philadelphia; and he, laboring on in his blissful ignorance, reports the circumstance, not suspecting for a moment that he was furnishing the proper antigen to those very rhus-opsonin starving bodies in need of it.

However, like most of the tangible proofs of the law of cure, it comes to us as a gift from outside our ranks. Be quick to accept these proofs. Wright, von Behring, Huchard, and the early immunity-understanding men, did not hesitate in using the term "homeopathic"; and, in this progressive day, please to recall that we have always been the progressive party in the field of medical endeavor—the new school.

Please continue "new" enough to be progressive and to look with favor upon anything holding forth a promise of immunity, remembering that, aside from the antitoxins, which give antibodies already manufactured (and wisely, too, for there's no time for grinding our one's own antibodies in tetanus and diphtheria), nature does all the work in curing, the vaccine or the drug but offering the necessary prod.

Take with you, please, that "antigen," "indicated remedy," "vital force," "opsonic index," "immunity," and "homeopathy" are to be said all in one breath, and reverently treasured in that private mental niche you've reserved for the memory of Hahnemann.

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[Gradually, but surely, the barriers between the different branches of the medical profession are being broken down. Time was when the homeopath, the eclectic and the regular could meet on no common ground. That time is happily past, and our differences are now largely sentimental ones. None of us need be ashamed to admit that bacterin-therapy is strikingly homeopathic; nor need we deny to that great man, Hahnemann, the glory that is surely his. The American Institute of Homeopathy proposed to the American Medical Association, at Minneapolis, a joint investigation of the law of similars. We hope it may be undertaken.—Ed.]

Dental Malformations and Anomalies

Some of the Factors That Produce Them

By LUCIEN D. CLARK, M. D., Akron, Ohio

THE history of dental malformations and anomalies is almost as old as the history of the human race, but it is only in recent years that the importance of the subject has been appreciated, not only from a cosmetic standpoint, but as to its influence upon the health of the individual.

Why are my teeth crooked? Physicians and dentists have been asked this question times without number, and perhaps upon the latest theory promulgated will depend the answer. If the practitioner of medicine is appealed to, he probably will name the theory of transmission, and, so, claim heredity as being the predominating factor.

The rhinologist may paint a verbal picture of the relations of the nasal structures to dental malformations, and emphasize their importance as a causative factor.

Those worshiping at the shrine of Hygeia will show you where faulty diet and hygiene are largely responsible for the trouble; while there are others who positively assure you that your teeth are neither crooked nor decayed, nor painful, but that you just think they are. Of this latter class, I simply make mention, and proceed.

Diet as a Factor

It has been prophesied that some day we shall be a toothless race of human beings. Let us see upon what theory such a prediction could be based, by considering the importance of diet as a factor in the probable result. We will take the well-known example of the athlete. This individual has a well-developed forearm and a magnificent biceps. How did he acquire them? He was not born with them: these anatomical forms were acquired by use—were developed. Now let us put this athlete at a desk for a time. It will not be long before his magnificent biceps have become flabby and his arm measurements have diminished, the tissues having been absorbed.

In subterranean streams and lakes fish are found that have no eyes; there being no use for them, they have gradually disappeared. There are authorities who contend that our ancestors gradually lost a prehensile tail, because they acquired the habit of erect posture and ceased to use it.

If, as seems within the bounds of reason, it is with the teeth as with other structures of the body, then, if they are not used for performing the functions in the manner and for the purpose for which they were intended, in time they will become modified to meet existing conditions; whether that be teeth of shorter life, frail or irregular development of the maxillary structures, or complete absence of teeth.

Can it be possible that the dental anomalies now prevalent represent the first step in a retrograde metamorphosis that in time will produce a race of people who will be able to eat only predigested food in tabloid or liquid form? Is it not the tendency of the times, in fact, I may say, the custom, to limit one's time in eating a meal? Thousands of people, both children and adults, have but from twenty to thirty minutes in which to eat. So, they must either eat but little of the coarser food that requires prolonged mastication, or fill up on slush, such as requires but a "whollup and a gulp"; and as they will not sacrifice quantity, they will, and do, sacrifice quality.

A coarse quality of food is intended, even with deciduous teeth, or else nature would never have surrounded teeth with gums so insensitive. It requires use to develop and maintain any structure, and coarser food is needed to stimulate the circulation supplying the teeth as well as the structures from which they are developed and by which they are supported; for, without normal circulation, normal development and life are impossible.

Hygiene as a Factor

It is said that "cleanliness is next to godliness"; and the maxim of Dr. W. C. Abbott, "Clean out, clean up and keep clean," as applied to impure and unhealthy conditions conditions elsewhere, applies equally well to the mouth. The health of the individual is dependent mainly upon his ability to resist infection. Food is not properly masticated in malocclusion; therefore, malocclusion directly interferes with digestion. Imperfect digestion means faulty nutrition and lowered vitality; so, it will readily be seen how various infections are invited through neglect of the teeth.

We all have had occasion to observe instances where mouths were absolutely filthy because of accumulations of food-products about the teeth, accumulations which were disturbed only by the food taken—and, ye gods, what a sight, what an odor! Would it be possible to compute the number of bacteria such a mouth contained? These bacteria are a direct factor in the early destruction of the teeth, both deciduous and permanent. Early destruction or removal of the deciduous teeth is commonly followed by faulty eruption of the permanent teeth, and comprises many of the cases of malocclusion owing to immediate causes.

Nasal Obstructions as a Factor

Several years ago Dr. Hartz, of Detroit, in an excellent article on the subject, made lengthy reference to nasal obstruction as a causative factor in dental malformations. He pointed out how nasal obstructions (or diseases) may, by compelling mouth-breathing, cause faulty development of the nasal structures through disuse. And to this all will agree.

To what extent nasal obstructions are a causative factor in producing the high-vaulted palate and irregular eruption of the teeth will now be considered.

Sir Morrell McKenzie examined 2150 skulls, and in 75 percent of these found some degree of deviation of the septum; showing that nasal obstruction is more common than supposed. Whether the skulls examined were those of the adult, and what the probable cause of these deviations, he does not state; but we know that irritating dust is the most common cause of deviated septum, by causing turbinal intumescence and subsequent hypertrophy.

Mayo Collier examined 1050 patients, indiscriminately, and found that less than 10 percent had normal noses, these patients ranging from 1 year to 80 years of age. It was rare to find any obstruction under the age of 10, unless due to temporary or immediate causes. This would indicate that nasal obstructions rarely are congenital, seldom occur before the age of 10 years, and are more common after puberty.

If, as Dr. Hartz states, the structures of the head and face have assumed their permanent form at about the 8th year of age, and, as Mayo Collier states, nasal obstructions are rare before the 10th year, it would seem that these abnormalities, as such, contribute but slightly, if at all, to the development of dental malformations (that they are commonly associated is admitted); for the first 14 permanent teeth are usually erupted before nasal obstructions appear, according to Mayo Collier. (It will be noticed that, in referring to nasal obstructions, observations have been confined strictly to the nasal cavities, no reference being made to the postnasal space—pharyngeal vault.)

If nasal obstructions were causative factors in faulty eruption or malocclusion, it would be reasonable to suppose such obstructions would accompany each and every case of malocclusion or faulty eruption. But they do not. If mechanical obstruction of the postnasal space (or pharyngeal vault) were a causative factor, you might reasonably expect to find adenoids or fibromucous polypi in all these cases. But you do not.

Mayo Collier points out that nasal obstructions are rare before the 10th year of age, and, if this is so, nasal obstructions, as such, can not possibly be a factor in these anomalies. The fact that we do not find adenoids or polypi in all cases of faulty eruption, and in comparatively few cases of malocclusion, argues, it seems reasonable to suppose, that adenoids or polypi contribute but slighlty, if at all, to these cases, even though their presence causes marked changes in the nasal structures, and, as Bishop (Chicago) says, are oftenest seen before the 10th year of age.

It seems, therefore, as though there were factors other than nasal or postnasal obstructions to be reckoned with in these conditions, and to these I will now refer.

Heredity as a Factor

Like begets like. The laws of heredity are as constant as the magnetic needle, and are so well understood by those who make a study of either plant- or animal-life that many interesting and even curious results are obtained through selection, as well as a degree of perfection that would be otherwise impossible.

In ancient Greece the laws of heredity were so well understood that the result was the development of a people whose physical perfection we of today envy. It appears as though the people of this day and age do not understand nature's inexorable laws, or purposely disregard them, and the only race they will, or do, take an interest in is the race for the almighty dollar. Few there are, if any, who when they marry do so with the idea of reproduction, and this, in a manner I will explain, will account for the frequent sharp contrast in the physical or mental makeup of their offspring.

The degree of vitality of either parent will determine the sex of the child. This is sometimes referred to as the "law of compensation." Physical characteristics of either parent, if dominant, will be transmitted to the offspring if not offset or modified by opposite characteristics of equal intensity in the mate.

Determination of the Sex

For example: A father may be of stronger vitality and have strong facial characteristics not offset or modified by the mother. The resulting offspring will be a female, looking like its father. If the vitality of the father is the lower, the child will be a male, and will look like its father. A mother may be of stronger vitality and have strong facial characteristics not offset or modified by the father, and the resulting offspring will be a male and look like its mother. If that mother has the lower vitality, the child will be a female and look like her.

If the physical characteristics of one parent are partly offset or modified by opposite characteristics in the other, we then may expect a partial resemblance or a resemblance in various structures of the body. For example: The child will have eyes like one of the parents, and hair like the other; ears like one, jaws like the other. The nearer perfection the offset or modification, the more harmonious will be the blending in the offspring, and the several children may not resemble either father or mother in characteristic appearance, yet, easily be identified as children of the same parents. This will account for a child having asymmetry of facial structures; and, as we consider maturity and development, it will appear clearly what the most potent factors in dental malformations are.

Maturity and development are the gifts to the child through heredity, and are the chief factors in dental malformations and anomalies. Maturity and development should proceed together, but they do not always do this. We see children who are mature beyond their years, as well as those in whom maturity has been retarded; yet, they are normally developed.

This is noticeable from a mental as well as a physical standpoint. When maturity of the mental faculties of a child has preceded physical development, we call that child precocious. When development of the mental faculties has not kept pace with maturity, we call that child a backward child. When physical development has preceeded maturity, we see a child large for its age. When mental maturity has preceded physical development, we see a child small for its age, or one which in appearance and manner seems older than it really is.

Observations on 500 Infants

In about 500 cases where infants were born at term, I have observed that some were well developed but immature, some were mature but not well developed, but the majority seeming normally developed and mature.

In some of those children, the bones of the head were very firm; yet, the fontanelles were large and the sutures open. These were cases of advanced maturity with late development. In others, the sutures were well united and the fontanelles small; yet, the bones of the head were soft and yielding to pressure, springing back to normal contour when pressure was released. These were cases of advanced development with late maturity.

In others, development and maturity were quite early, the bones of the head being quite firm and unyielding, the sutures closed and the fontanelles small. There were cases of early development, as well as of early maturity. In others, the bones of the head were soft and yielding to pressure, the sutures open and the fontanelles large. These were cases of late development as well as late maturity. These peculiarities were observed in families as characteristic of their offspring.

A mother may develop early and mature late—a family characteristic. The father may develop late and mature early—also a family characteristic. The resulting children will develop and mature early, normally or late. A mother may develop late and mature late; the father may have normal development but mature late. Their children will have tardy development, with late maturity. A mother may mature early and develop normally, the father mature early but develop late. The children will mature early, with tardy development. If, on the other hand, we have both parents mature and develop early, and this is characteristic in families of both parents, their offspring will mature and develop early. If parental maturity and development is late, it will be late in the offspring.

Thus, it will be seen how the various types of dental malformations can be accounted for through heredity in those who present asymmetry of the facial structures, as well as in those who do not, for, by the advanced maturing of the maxillæ before the enamel-germ is thrown off, unusual and irregular

resistance is offered, and the enamel-germ is directed to the right or left, backward or forward, in the line of least resistance.

As to the Deciduous Teeth

The question arises, Why are the deciduous teeth rarely, if ever, crooked?

It is not difficult to answer this question when it is remembered how the enamel-germs descend in a vertical manner into the substance of the jaw, thus paving the way, as it were, for their line of cleavage and position when erupted. With the enamel-germs of the permanent teeth there is no vertical descent, but a backward extension into position. The position of the enamel-germ of the permanent tooth depends upon the resistance offered during the period of backward extention. The position of the permanent tooth depends upon the position of the enamel germ, and the resistance offered during the period of eruption, whether that be the early maturing of the maxillæ, the presence of a partly absorbed fang from a deciduous tooth, or both.

If the child inherits the teeth of one parent and the maxillæ of the other, the teeth may be either separated or crowded. This will explain why you will sometimes find a well-developed and matured maxilla with poorly developed teeth, a poorly developed maxilla with a well-developed and regular set of teeth, as well as irregular teeth in a normal maxilla. It will also explain in part why irregular teeth are not always accompanied by a high-vaulted palate and abnormalities of the nasal structures, although they are frequently associated.

You will observe instances—and many of them—where there are a high-vaulted palate, and normal teeth and nasal structures; also frequently you will find nasal obstructions, chronic rhinitis, with atrophy, yet, beautiful teeth as well as normal nasal structures and palate, but teeth, nevertheless, badly crowded. The high-vaulted palate, when not explainable through heredity, is commonly produced by immediate causes, to one of which I will refer.

It is a well-known fact that but few hours after birth some babies "sit up and take notice." I have seen them insist on looking at a lighted lamp while the nurse was making their initial toilet. They soon learn to cry; also, that a lusty cry brings someone to take them up and pay attention to them. The mother (if it happens to be the firstborn; sometimes in those following) finds that something in baby's mouth has a quieting effect, and a pacifyer is palmed off on baby as the "real thing," and is commonly used as a substitute for the sake of peace in the household.

Something else is taking place in the meanwhile. A pacifyer is somewhat larger, longer, and much more resistant than the mother's nipple, and, as it is pressed upward by the tongue, slowly but surely does it crowd the hard palate, the results of which, no doubt, many of you are familiar with.

It will be seen in lower animals how, by selective mating, almost any characteristic may be produced: in fowls and birds, even to the marking of a feather. Symmetrical and uniform features, well-proportioned structures—even to normal or uniform maxillary processes and teeth—can be produced in the human family, where asymmetry is not caused by immediate causes, heretofore mentioned.

Unfortunately, however, as there is little or no thought for the generation when the mate is selected, and the family-history is covered up almost always, the offspring often are given, as an inheritance, dental anomalies that places them at a disadvantage in their fight for existence. While at present we have but faint hopes to prevent most of these anomalies, we do have means at hand whereby all of these victims may be benefited. The orthodontist has shown us that, by early attention and proper treatment, very satisfactory results are obtained in malocclusion and in many cases of malformation.

It requires several generations to produce a symmetric strain or race by selective mating; but it is inevitable, even in the human family, where lineage is not contaminated by that disease which brings misery alike to king and to serf.

The Use of the Obstetric Forceps

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois
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EDITORIAL NOTE.—This is the final installment of Dr. Rittenhouse's series upon the obstetric forceps. In this article he presents a use for this instrument that will seem novel and unusual to many of our readers. Do you agree with him that it may properly be used to prevent laceration? Let us have your opinion.

IV

Saving the Perineum

TO APPLY the obstetric forceps for the purpose of preventing laceration of the perineum sounds like a paradox. Nevertheless, if properly managed, this instrument may be made extremely useful for this purpose.

I have long maintained that the frequency with which laceration of the pelvic floor occurs in childbirth is the greatest reproach that can justly be brought against the profession today. Just what is the percentage of its occurrence, though, may be subject to a difference of opinion; it is difficult to get reliable statistics on the subject. But it seems to me that there exists no room for difference of opinion regarding the lamentable frequency of this accident or the indifference with which it is viewed by a considerable proportion of the medical profession. Its occurrence is regarded by many as a matter of minor importance, and it is thought that the placing of a few sutures relieves the doctor of any further responsibility.

Two Facts Regarding Perineal Laceration

Now, I contend that there are two tremendous facts bearing upon this subject, which should be persistently dinned into the ears of the members of the profession, until they receive the recognition which their importance deserves.

One of these facts is that a very large percentage of all primiparæ (certainly more than 75 percent) will be torn if no means of prevention is adopted; the other is, that immediate repair as generally practiced is a complete failure in a vast majority of the cases. I am not saying that the blame for ill result rests upon the general practitioner altogether. The obstacles in the way of good results are very great. The wound is extremely irregular and hard to approximate; some of the structures are deeply retracted; the tissues are in a condition resembling a severe bruise; keeping the wound aseptic for a week is almost impossible. In the face of all these conditions, and in view of the high degree of skill required to do the operation properly, we need scarcely wonder that the results are unsatisfactory.

But these discouraging facts are simply so many reasons for avoiding laceration. They justify the expenditure of almost any amount of effort and ingenuity if that holds out the slightest hope of diminishing the frequency of this unfortunate accident. And experience amply shows that there is such hope, if only the profession can be brought to realize that *living tissues will stretch to an almost unlimited extent, provided they be given time enough.* In other words, *time* is the one great factor in prevention.

How to Delay the Second Stage

The frequency of laceration is due to the fact that the child's head is forced through suddenly when dilatation of the vulvar ring is only partly complete. The problem, therefore, is, to make the last part of the second stage of labor so slow that the soft tissues of the pelvic floor may have time to stretch, instead of tearing.

Experience shows that this is best accomplished by the judicious use of chloroform and, if need be, the correct employment of a proper forceps. As soon as the perineum begins to bulge and the vulvar opening to dilate, the administration of chloroform should be carefully begun, the amount given being carefully gauged by the effect observed. In some patients the labor-pains are simply moderated in force and frequency in such a manner that perfect control of the advancing head is secured and the delivery made gradual enough to avoid laceration.

With the majority of women, however, something more is needed. In the case of these patients, complete anesthesia stops the contractions so completely that delivery is delayed indefinitely, while with any less degree of anesthesia the patient is unmanageable,

because she is only semiconscious and incapable of obeying orders. When she feels the impulse to bear down she may suddenly expel the head and cause the very accident we are trying to avoid.

In view of these facts, I have long made it my routine practice to begin the administration of chloroform as stated above and promptly to induce complete unconsciousness. Now, if the pains remain fairly frequent and powerful, I simply control the delivery to a safe conclusion, taking plenty of time. But, if the pains are almost entirely stopped by the anesthetic, I slip on the blades and by very careful and moderate traction complete the delivery.

With the patient asleep and the instrument grasping the head, I am absolute master of the situation. I can deliver as slowly as is necessary to permit stretching of the perineum, instead of its tearing; consequently I rarely have a laceration occur. And I may say, too, that when I try to delivery without the combined use of chloroform and the forceps I generally regret it.

The use of the forceps for the purpose here indicated is criticized by some, on the ground that it increases the danger of infection; others object that the instrument should be employed as seldom as possible, on general principles.

The first objection is shown by experience to be without force, provided proper asepsis is secured. The second one is mainly sentimental and springs largely from the prejudice prevailing among the laity against instrumental intervention. The remedy for this prejudice is more teaching, more explanation of the object to be attained. Patients or their friends seldom persist in their objections when I explain that what I am about to do is for the purpose of preventing laceration.

Other Methods of Prevention

Of other methods of preventing laceration, one, which seems to have some value, is support of the perineum by the hand. By retarding the advancing head, manual support may help, gaining some time and thus contribute toward a safe delivery; still, in my opinion, the same result can be better obtained by resorting to anesthesia.

In giving support with the hand, the perineal tissues may be crowded from the sides toward the median line, with the tips of the fingers on one side and the thumb on the other. This procedure undoubtedly has some value, although that value is lessened by the fact that the force is expended mainly upon the skin, while perineal lacerations usually start in the mucous membrane of the vagina.

Another method that has been much lauded is the application of hot fomentations to the perineum during the period of dilatation. Some years ago I gave this method an extended trial for a period of over three years, but there was no evidence that it was really effective. My percentage of lacerations was not nearly as low as it has been since the chloroform-forceps method, as described, has been followed. However, I can see no harm in the hot fomentations, provided proper precautions are taken against infection.

Incisions in Perineum Condemned

The method of making incisions on each side of the vulva when a tear seems imminent, in the hope of keeping the laceration lateral instead of its running backward through the perineum, I mention only to condemn. There are two objections to this method, either of which should be conclusive.

In the first place, while the tear may be started laterally, it often runs irregularly upward and backward in a manner more difficult to repair than if it were in the median line. In other words, it will not stay where it is put. Besides, there will be two wounds instead of one.

The other objection to the method is still more formidable; if it is resorted to at all, it often will be done unnecessarily. A case often looks hopeless when dilatation is half or two-thirds complete. It seems as if laceration were certainly about to take place; and, yet, we all have the experience that those cases frequently come through without injury. Suppose the operator had cut in such a case. It would have been malpractice. No human being is wise enough always to foretell whether a given perineum is going to give way or not; and, therefore, it is better to adopt the optimistic course and try to save every perineum, even though there always will be an irreducible minimum in which no amount of skill can prevent an accident.

Vaccination Against Smallpox

A Story of Experiences Upon an Indian Reservation

By JAMES L. NEAVE, M. D., Dresden, Ohio

IN MY younger days I was in Government service, on the frontier, in charge of some 1500 Indians, and practice among these people, as we well know, in no way resembles practice among whites. It can readily be imagined that these half-savage redskins did not take kindly to being vaccinated; still, at one time, when they were under the stimulus of an epidemic-scare, I did manage to vaccinate a large number of them, although I found it impossible to more than approximate results, while succeeding in keeping only a moderate proportion under observation.

An Experience Among the Indians

One winter, when variola was increasing to such an alarming extent in the States, and also was showing itself in isolated instances in frontier towns about us, I obtained some crust bovine-vaccine. (This was before the days of the lymph in sealed tubes.) Proceeding to vaccinate the Indians under my care, I used the scarifyng vaccinator, introducing the virus in two places in the left arm.

Among those whom I thus vaccinated, 187 were primary cases, while 152 of them showed scars of a previous inoculation. Of those in the first class, I succeeded in tracking 90 successful "takes." In the second class I traced 15 successful and 42 unsuccessful inoculations. From my knowledge of these people, I have good reason to believe that the percentage of primary successful vaccinations was much larger than would appear from the figures given. The subjects unaccounted for never reported to me; which was satisfactory evidence to me that in the majority of cases not reported the virus had worked successfully, for the Indians were thoroughly aroused on the subject and each anxious "to have a sore arm."

Of the 90 individuals seen, the majority manifested more or less constitutional disturbances of varied character: fever lasting from two to five days (in several instances, even longer); headache, backache, and pains in the limbs being most frequently complained of. Several were so sick that their relatives thought there was danger of death and asked whether they had not better get the grave ready. (Indian religion will not permit a dead body to remain in the "teepee" for one single minute after death. I have known them to place a dying person outside the door, so as not to have him die in the house.) The symptoms, of course, really indicated nothing so serious as that, but it seemed so to them; and I instance it in order to show how severe the general manifestations were.

Now as to the local effects of the bovine-crusts vaccination of the olden days. There occurred among those vaccinated a number of cases of erysipelas which extended from below the elbow to the shoulder. The arm, as a rule, was immensely swollen, often indurated for two-thirds the circumference, red, tense, and painful. Enlargements and irritation of the axillary glands was present in nearly every instance, while there were two cases of axillary abscess. The resulting scabs mostly were of the size of a silver quarter, some even as large as a silver half-dollar piece. When these crusts were removed early, there was left a deep circular ulcer, some one-fourth of an inch deep, these filling slowly by granulation.

Cases Among the Whites

To the cases occurring among the whites at the Agency, I was able to give closer personal observation than I could among the Indians, and these were closely watched and proved extremely interesting. Among the whites, I used bovine quills, and with the following results: Primary cases, 4, all successful. Secondary vaccination, 15; of these, 8 were successful, 3 partly so, and only 4 failures. Among the 8 successful cases, all of whom had good scars of previous vaccination, (performed, however, many years ago), there occurred 2 cases of erysipelas, checked, however, in their incipiency.

All the whites vaccinated suffered more or less from fever, loss of appetite, sleeplessness, and extreme swelling of the arm, accompanied by tender and enlarged axillary glands. All had large scabs, with deep ulcers marking their seat when removed. The 3 partly successfully vaccinated persons had all these symptoms, only in less degree, of shorter duration, and with scabs but partly formed and showing but little ulceration.

Of the primary cases among the whites, 1 individual experienced no constitutional disturbance of any kind; still, the inoculation was eminently successful. A second individual developed high fever, which assumed an intermittent character and lasted four days; also, racking pains in the back and limbs, total loss of appetite, heavily furred tongue and a roseolar eruption lasting one day; arm much swollen, tense and indurated; resulting scabs large, leaving large cavities.

The third case was the most remarkable of the series, in a child of two years. For a week after the introduction of the virus, nothing was noticeable, excepting the persistent freshness of the scarified places of introduction.

Then the virus manifested itself in the usual manner. The swelling, however, came on rapidly, the entire arm becoming red and angry with erysipelas. In a few days the wounds were surrounded by hundreds of points of variolous eruption, having the umbilicated center. The local irritation immediately about the points of introduction of the virus became greater from day to day; until finally slight gangrene supervened, with superficial sloughing of tissue at these two points, each a space of an inch or more in diameter, and having the peculiar odor of gangrene. The resulting ulcers were filled with healthy granulations and healed rapidly, until all closed, excepting a space equal to the original scarification, which healed by scabbing. The child was put on syrup of ferrous iodide, 4 drops every four hours; and complete recovery came in six weeks.

A First Experience with Bovine Virus

This was my first experience to any great extent, with bovine virus. I had used it in a few cases before, but this time I learned some things by considerable experience. Two years before I had used the quills, but this was my first trial with the crusts—and my last.

I have never had any difficulty in getting the virus to "take"; on the contrary, the percentage of "takes" was large, at least 85 percent. I seldom had failure among primary vaccinations—in point of fact, I had not a solitary failure in primary cases among the Indians. There may have been such, but I was unable to trace them.

As a rule, I found the virus to work slowly. I always waited more than a week before I would revaccinate, as I found that at least that much time must elapse before there are any manifestations of any kind. Then, again, I noticed that ordinarily the bovine virus was much more severe in its action, both in the local irritation and also in the constitutional disturbances induced, than I ever had known humanized virus to be.

At the present time it is not a choice between humanized and bovine virus. There can be no question today as to which should be used. Whatever prejudice against vaccination may have existed in honest scientific minds, was all caused by a suspicion, amounting to a certainty, that there might be, there probably was, a valid objection to the humanized virus. Even granting this fact, no up-to-date, broad-minded professional man will ever speak or write against the value of vaccination itself. If any scientific fact was ever proven, it certainly has been proven beyond all cavil that vaccination has driven smallpox from many quarters where formerly it existed as a scourge.

The experiences detailed in this article are not intended as a demonstration in favor of those who oppose vaccination. My experience was not a pleasant one. Immediate results were not pleasing—but the treatment certainly was effective.

To this day, smallpox has been, and is, unknown among my Indians, where in former days the ravages were frightful. Certainly something caused improvement among those people, and vaccination was the only measure utilized in the elimination of that disease.

Had I been governed by appearances only, taking into consideration local and constitutional irritation, some individuals undeniably being sick after the operation, I could have jumped to the conclusion that the remedy was worse than the disease. But I kept my wits about me and refused to be stampeded. I take it as truth, that, of all classes of men, it behooves the physician to keep his eyes open and learn. In this way only can he advance in his science.

The Perfected Bovine Virus of Today

My observation told me several things: The bovine virus needed perfecting. In its form as I knew it at that date, it was crude—in the crust form the virus certainly was crude and imperfect. It was necessary to improve the virus—not to condemn it.

Of late years, this needful improvement has been accomplished, and the perfected virus, as now placed on the market by responsible dealers, is absolutely safe from infection, such as was formerly, and with some reason, claimed for the old-fashioned humanized virus. And it is positively protective

in its action against smallpox, so that there is absolutely neither sense nor reason in the crusade against vaccination. The only limit to the use of bovine virus should be that the use of crusts should be prohibited.

Another thing as to the use of bovine virus. Its local action in many cases is inclined to be severe. Therefore, experience taught me to introduce it in but one single place in each individual. It is better to repeat the operation, in case of failure—which is rare—than it is to have two points of insertion "take" in the same individual simultaneously. The additional insertion is not necessary, and the protective power is no greater for having made two insertions at the same time.

Certainly, I think the day has now surely come when vaccination should be made compulsory wherever civilized government is established. Bovine virus as now especially prepared should be made the legalized form. And one step further: the use of humanized virus should be outlawed, and it should be a punishable offense to make use of it. And it seems to me that, in the light of science and example as seen today, no man, especially an intelligent observing physician, can consistently oppose vaccination. Certainly, he can not read and observe, and then honestly condemn its practice. To abandon vaccination today would be a disastrous setback to the world.

Some New and Important Laboratory Diagnostic Tests

How to Elicit Them, and What They Mean

By J. FAVIL BIEHN, A. M., M. D., Chicago, Illinois
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AMONG the many new laboratory reactions of value in diagnosis, there are several that have recently been proven of definite worth, and these I wish to bring to the attention of the readers of CLINICAL MEDICINE.

One of the latest, most novel, and yet most important of these tests is the sero-diagnosis of pregnancy, known as Abderhalden's test.

Abderhalden's Sero-Diagnosis of Pregnancy

This test is performed by incubating the serum of a woman thought to be pregnant, for a number of hours, together with a small portion of sterile human placenta, this placenta having been so prepared that it can contain no free soluble protein. As a result of this treatment, if the woman is pregnant, a soluble protein will be formed which will dialyze (pass through animal membrane) readily. The dialyzate thus obtained is then tested for soluble protein (peptone) and if this substance is found present, and provided proper controls are made, the reaction is considered positive, in other words the woman is pregnant.

This serum reaction is known to occur as early as the first or second week following conception, probably earlier, and it persists practically throughout the entire pregnancy. While the field for this test is limited, yet there are times when it should be of the greatest value.

Among the conditions in which the Abderhalden test is particularly valuable are abdominal tumors simulating pregnancy, extrauterine pregnancy, and suspected pregnancy in unmarried woman. Blood obtained during the menstrual period does not give the specific response. Nearly all authorities agree that the elicitation of a positive Abderhalden reaction is an indication that pregnancy exists.

The Wassermann Reaction

This test now in general use for the diagnosis of syphilis, has been known for some time and is being made by most laboratories, either in the original or some modified form. In the minds of some practitioners there seems to be a question as to its reliability. This I believe is due to the fact that many laboratories, not having the facilities to secure the original reaction which requires considerable time and much care in technic, are using the various modifications, none of which so far have established a reputation for reliability. Personally, I should not rely upon any of these modifications.

It is essential that the physician should understand the limitations of this reaction. It is rarely positive during the first month following syphilitic infection. Therefore, if a diagnosis of a recently infected case is required and if the primary lesion is in evidence, smears of this lesion should be examined for the treponema, and it is well to remember that this examination should be performed before any treatment is instituted, since such treatment may modify or mask findings. The same is true of the Wassermann test. It is essential that no antisyphilitic treatment be given for three or better four weeks previous to taking blood for the Wassermann reaction, since such treatment may cause the reaction to be negative.

Secondary, untreated tertiary, florid and hereditary syphilis, and also cases of paresis, show a high percentage of positive reactions. Tabes and latent hereditary syphilis rarely show more than 60 percent of positive reactions. In tabes, however, the positive reaction may be obtained from the cerebrospinal fluid, even if the blood gives a negative reaction. Further, the ingestion of large amounts of alcohol may mask the reaction. The only conditions so far known in which a positive Wassermann reaction may occur, other than in syphilis, are leprosy, malaria, and yaws.

The Complement-Fixation Test for Gonorrhea

In a suspicious case, especially of the chronic type, the complement-fixation test for gonorrhea is a valuable diagnostic aid. In fact, it is probably the most reliable test we have for the presence of this disease. Many acute cases do not yield a reaction, but when this is the case a diagnosis can usually be made by locating the gonococcus, microscopically or culturally. The cases difficult of diagnosis are usually the chronic ones, and it is particularly in these cases that the complement-fixation test is of value.

Complement-Fixation Test for Rabies

In the Research Department of The Abbott Laboratories my colleague, Dr. C. A. Zell, has recently perfected a complement-fixation test for rabies. A large number of experiments have been made and thus far we have been unable to obtain this reaction in animals not proven on subsequent investigation (postmortem examination for Negri bodies) to be definitely attacked by the disease.

This reaction occurs in experimentally infected animals within three or four days after inoculation, and in all cases examined in which the clinical symptoms were at all questioned we have been able to make diagnoses. Also, in a number of cases, dogs in which rabies was not even suspected, dogs that were obtained from the pound to be used for other work, were found by this test to have the disease. The results were verified by the finding of Negri bodies in every case.

This reaction is of value in the early diagnosis of rabies since we can examine the serum of a dog who has bitten persons and who does not show the characteristic symptoms, thereby making a diagnosis, positive or negative, without destroying the animal. If the reaction is positive, the treatment may be instituted immediately; if negative, the animal can be held and the blood examined again in ten days or so; if the reaction is still negative, there is no danger of rabies.

The great advantage of this new test is, that if the animal had been killed at first, the Negri bodies might not have been found, yet the animal upon subsequent examination, if allowed to live, might have been shown to be in the early stages of the disease.

Furthermore, by means of this test patients who have taken antirabic treatment can be assured of its efficiency. One or two weeks after having completed treatment a sample of the blood should show a positive complement-fixation reaction indicating the presence of immune bodies. Heretofore, it has not been possible to prove definitely that the patient was properly immunized by the Pasteur treatment.

We do not know as yet just how soon the reaction will become positive after a human patient is bitten. Unquestionably, however, if the infection has occurred as a result of a dog's bite the reaction would be determined as soon as the incubating period is well established. However, it is advisable that the Pasteur treatment be given immediately in all cases in which persons have been bitten, if the animals are at all suspected of having rabies.

This reaction is of value to boards of health, since it is very definite and will allow of a diagnosis being made without destroying the animal, thereby permitting holding the animal for clinical observation in the event that the disease may develop later in the individual who has been bitten. Also, valuable dogs suspected of having this disease may be saved from unnecessary destruction. This is impossible by any other present known method, except by isolation of the animal and observation of the symp-

toms of the disease, which in negative cases is practically unavailing.

How to Secure Blood-Serum for Diagnostic Purposes

In order to make any of the preceding tests (Abderhalden, Wassermann, gonorrhea, or rabies) 2 Cc. or 3 Cc. of clear sterile blood-serum are required. Serum for this test is obtained as follows:

With a sterile syringe withdraw 5 to 10 Cc. of blood from one of the superficial veins, those of the bended elbow usually being selected. This blood is placed in a sterile vial and allowed to clot. The clot is separated from the side of the vial and allowed to sink to the botton. Then, with a sterile syringe, the clear serum is withdrawn from the clot, placed in a sterile vial, and mailed to the laboratory. At least 2 Cc. (30 minims) are required. The serum must be perfectly clear and sterile. It may be separated immediately by centrifuging the blood as soon as withdrawn. It is essential that no red blood corpuscles or hemoglobin be obtained in the serum.

These tests are all of very great importance, adding greatly to the diagnostic skill of the physician and, secondarily, to his therapeutic efficiency. The writer hopes that many readers of CLINICAL MEDICINE will make use of them in his professional work, and report.

The Treatment of Drug Addictions

By A. K. DETWILER, A. B., M. D., Omaha, Nebraska

EDITORIAL NOTE.—New interest has been given to the problem of narcotics through the effort to secure proper legislation to control the sale of habit-forming drugs in this country. That these drugs are used far in excess of actual needs every physician knows, for he has to deal with the result—and the result is the habitue, the "fiend." Dr. Detwiler's paper is a very timely one.

AMONG the many problems that confront the physician on the border-line between internal medicine and psychiatry, none are more important and interesting than that of the drug-habitués. With these people there is always some real or imagined physical derangement, some weakness, or some impairment of the intellect, feelings or will which adds complexity to these distressing problems' Ever since the time when, during my student days, Erlenmeyer's book on the morphine-habit fell into my hands and just when a physician's wife addicted to the drug came to the place where I lived my attention and sympathy have been directed to this class of people.

Among those addicted to drugs, there are so many factors to be considered that it is not claimed that an absolute cure can be effected in every instance. Many of these people are weak of intellect or morally perverted, some even are feeble-minded, others have been suffering physical or mental pain, yet others have tried to ward off failure or to stimulate their flagging intellect in the hope of gaining success where failure seemed inevitable.

The ease and quickness with which morphine relieves pain and distress is well known to all, so that even if the patient has abandoned the drug and the temptation again returns, the knowledge of this fact is the cause of many a relapse.

Cocaine is a powerful stimulant and gives the feeling of mental and physical fitness which seems to make even impossible dreams possible. But after a few months' use this is followed by delusions of persecutions and of the conviction that the world is against them; and, while they dread their slavery, they continually revert to it.

With alcohol it is different. Alcoholism is a social disease, and not a secret vice. Men and women cannot realize that they may not take even one drink or drink in moderation, and it sometimes takes several bitter lessons to convince them of the fact. There is no compromise, and they must realize that even a single drink of an alcoholic beverage may blot out the sensibilities and bring back the danger of alcoholic excess. In many instances, alcohol produces nervous lesions which cause a weakened mentality. Those whose emotional natures demand and enjoy excitement, and in the effects of the drugs find gratification of their cravings, may need partial restraint, and substitution of normal forms of stimulation before they can be started toward better things.

But it is in those, formerly, almost hopeless cases, where weakness of the will and lack of decision, as well as absence of desire to mend their ways, prevented a return to normal life without the use of stimulants, that the present mode of treatment presents its best opportunity for successful management.

Where the habit had been induced by some definite pathological change which was removable, success ordinarily followed the withdrawal of the drug after removal of the cause. But those cases which depended upon obscure, perhaps hereditary nervous derangement, where persons took the drug without definite purpose and did not wish to give it up—in other words, the purely psychical—were always doubtful ones; and while with greater or less pain or suffering the drug could be withdrawn, the outlook was gloomy and obliteration of the craving was uncertain if not impossible.

Towns and Lambert Rapid Withdrawal Method

But now, since the introduction of the Towns and Lambert method of rapid withdrawal and treatment, one can promise the patient and his friends the rapid and complete obliteration of the craving and assure them that the suffering will be reduced to a minimum in time and amount. Ridicule and doubt usually meet the assertion that it is possible to remove the desire for cocaine, alcohol or morphine in four or five days with very little suffering to the patient, even if he is not anxious to overcome his habit and is weak of will. But it is in just this kind of cases that the stimulating and antidotal effects of the treatment are most effective.

This method, while best carried out in a hospital or other institution, can be conducted in a private house with the aid of a nurse, and its main features are these: free elimination and purgation, accompanied by the administration of this almost specific mixture: 2 parts of 15-percent tincture of belladonna, and 1 part each of fluid extract of hyoscyamus and of fluid extract of xanthoxylon. In order to get positive, definite result from this mixture and to remove the nagging desire for the drug, this mixture must be given almost to the point of intoxication; in other words, 6 or 8 drops must be given in a capsule every hour as long as no signs of belladonna poisoning are evident. It is diminished or stopped if the patient at any time shows specific symptoms, such as dry throat, redness of the skin, dilated pupils, the peculiar sharp, incisive voice, and fixed ideas. To achieve success, belladonna intoxication must never quite be reached, but only seen dimly in the distance.

To begin the treatment of the morphine-habitué, the estimated daily dose of drug is divided into 4 parts, all to be used if necessary. To start with, 5 compound cathartic pills are given, and if these do not act in four or five hours they are followed by a saline laxative; then half the daily dose of drug is given, together with 6 drops of the belladonna mixture. This mixture is kept up every hour for six hours, and then increased by 2 drops every hour, if there are no symptoms, until 15 drops is reached.

After ten or twelve hours from the beginning of the treatment the patient is again given 5 compound cathartic pills, followed by the laxative saline if necessary. When these have acted thoroughly, the second dose of drug is given, this consisting of one-fourth of the daily dose. The belladonna mixture is still continued. Twelve hours after the second dose of the drug the cathartic pills are again repeated as before. After these have acted, one-half of the remaining quantity of drug is given if necessary. This usually is the patient's most uncomfortable period, and at this time 2 ounces of castor oil is administered, and the intestinal canal thoroughly cleared out.

The object of this treatment, of all this purgation and medication, is to avoid the nagging diarrhea which frequently is the most annoying symptom of the withdrawal of the morphine.

The Supportive Treatment

If the heart flags at any time, cardiac stimulants such as strychnine, digitalin, or both, are indicated. Simple nervousness can be controlled, if necessary, by the administration of wet-packs, full doses of bromides, or codeine in from 1- to 5-grain doses. To overcome the exhaustion and relaxation when they are off the drug, the tonics which do most good are arsenic, phosphorus, and strychnine. During the treatment, the fullest possible diet of eggs, cereals, milk, and other easily digested food is to be given. Some have a good appetite from the beginning. Others begin in a weakened condition and do not eat until after the treatment is ended; then the appetite usually becomes vigorous and care must be taken that they do not overeat. It frequently happens that the gastric distress and intestinal discomfort are ascribed to the withdrawal of the drug, when it really is due to overeating. In such cases, if the stools become clay-colored and the patient feels

nauseated, nothing acts so well as the bile-salts in 1-grain doses, repeated every hour for five or six doses.

To Wean the Alcohol-Addict

The treatment of the alcoholic with this combination of drugs differs only in so far as the latter displays increased sensitiveness to the belladonna and he is much more likely to show slight delirium than the morphine- or the cocaine-habitué. This delirium must not be confounded with the furious delirium produced by alcohol. The belladonna delirium usually is confined to one or two insistent ideas, while the hallucinations from alcohol follow each other with great rapidity, or there is occupational delirium. When these symptoms of poisoning occur, the medicine must, of course, be stopped, to be started again with the original smaller dose.

When the treatment of the drunkard begins in the middle of a debauch, the first necessity is that he sleep, and the only treatment which precedes the hypnotic is the compound cathartic pills. Chloral in 15-grain doses or paraldehyde in 1-dram doses, or both if necessary, is given to induce sleep. If these are not effective within two or three hours, we give a hypodermic injection of 1-10 of a grain of apomorphine, 1-20 of a grain of strychnine, and 1-150 of a grain of hyoscine. If the patient goes to sleep easily, he is wakened every hour for his medicine; if not, he is allowed to sleep. The cathartic is repeated, with the addition of 5 grains of blue-mass, at the end of twelve or fourteen hours.

Old or very weak and nervous patients should have, with their milk, 1 or 2 ounces of whisky four or five times a day for the first thirty-six hours. Young and vigorous patients may need more hypnotic medicine, and it may be possible to carry them through without further administration of alcohol. If the patient has an alcoholic gastritis and cannot retain the medicine, that condition must be relieved first by means of Tully's powder; sodium bicarbonate and bismuth subnitrate.

The Care of the Cocaine-Habit

With the cocaine-habitué the treatment is varied only by adding strychnine at the very beginning, while no cocaine at all is ever given. Frequently we meet such patients who take more than one drug and then the treatment must be more prolonged. Sometimes the nervous symptoms are most marked, and with the withdrawal of the drug the mind begins to waver and they lose control of ideas and misinterpret sensations and emotions, there also are jactitation and a low, muttering delirium, and the patient begins to toss and thrash himself about furiously. Under these circumstances nothing equals the hypodermic injection of the old Livingston solution of ergot, repeated every two hours in bad attacks. It is occasionally necessary to continue this for two or three days.

No Craving Remains

After the vigorous elimination ensured by this treatment there remains no craving for the drug, but the patient feels exhausted and languid, and he may be sleepless. For the first few nights, if there is insomnia, they should receive bromides in full doses or some hypnotic, such as medinal or trional. For the languor, tonics should be given at regular intervals; and glycerophosphates with arsenic are quickly acting and of great service. This toning should be continued for several weeks, while the diet should be easily digestible and abundant.

If the narcotic craving is not the symptom of some mental state that remains after the habit-drug is removed, the patient will be cured, and most morphinists are so glad to be freed from their slavery that they will not return to the drug.

With the alcoholic is it different. This treatment will do all that can be done for the one who wishes and desires to be cured. It will establish self-confidence to go on without it, but as long as he lives he can not touch alcohol in any form whatever without danger of relapse. When these people realize that they can not drink in moderation, and acknowledge the fact to themselves and others —it may be after many severe lessons—then there is certainty of cure.

Care in Detail

The successful issue of this plan of treatment depends upon the carrying out of the minute details, and unless this is done the treatment will fail. Patients rarely begin with any confidence of success and they must be placed where they can be carefully watched and guarded.

This treatment is not offered as a cure for the degenerate or mental defective, but it will obliterate the craving for narcotics in a short time and leave the patient in the best possible condition to regain normal and vigorous health, free from morbid desires.

WHAT OTHERS ARE DOING

TYPHOID FEVER IN THE COUNTRY

In his message to the New York Legislature on the subject of public health, Governor Sulzer points out that the death rate in cities has steadily fallen and is now below the rural and the village rate. Especially is this true as regards typhoid fever. Thus, for instance, 1128 individuals succumbed to this disease in New York State during the last year, and the Governor claims that this number is too great by at least 1000. He therefore warmly advocates the establishing of a commission whose object is to be to ascertain how the death rate for villages and the country can be made to follow the urban rate in its downward course, the former showing a steady rise.

CALCIUM DEFICIENCY IN HEMORRHAGE

Disturbances of the calcium metabolism may be the cause of obscure uterine bleeding, according to Beckwith Whitehouse. (*Practitioner*, June, p. 952.) If the calcium content of the blood is deficient, the coagulability of the latter is defective, and hemorrhage results. Such a patient presents no physical signs, as a rule. The only indication of calcium deficiency, as a cause of metrorrhagia, observed by him, is its occasional association with urticaria. He finds that occasionally the combination of thyroid tissue with calcium is efficient.

SALVARSAN AS A CURE FOR PERNICIOUS ANEMIA

Byron Bramwell gives an account of 11 cases of undoubted pernicious anemia and of 1 doubtful one, treated by salvarsan. Writing in *The British Medical Journal* for May 24, page 1093, he says that, of the undoubted cases, 4 apparently have been cured, although whether a relapse will occur he is unable to say. In 2 of the remainder there was very striking improvement. In 1 case there was considerable improvement, followed by relapse and death. In 1 there was slight improvement, but death ensued from bronchial pneumonia while he was under treatment. In 2 cases there was no improvement, and in 1 slight improvement, the patients being still under treatment.

Dr. Bramwell gives salvarsan intramuscularly, but has substituted neo-salvarsan, because it produces less marked local reaction. The dose employed was 0.3 Gm, half the dose usually given in syphlis. In every case reported, a number of injections were given, usually at intervals of a fortnight or more.

CONSERVATIVE THERAPY

"Conservative therapy" is the eminently appropriate way in which the German medical profession speaks of remedial efforts as opposed to the surgical, or operative, method of dealing with pathologic conditions. There still are (or again are?) doctors in the Old World who believe in medicinal treatment. There once was a time when a doctor was a doctor, and when surgical interference, as the exceptional way, was marked by a specific designation.

THE TECHNIC OF BACTERIN TREATMENT

Athole Ross contributes to the July number of *The Practitioner* an interesting article upon "The Vaccine Treatment of Infectious Diseases." At first, he tells us, injections were given subcutaneously at 10-day intervals. There was a good deal of constitutional disturbance, including headache and general malaise. At the same time there was some local reaction, shown by redness and swelling at the site of injection. In order to avoid these unpleasant consequences, he reduced the dosage by about half, giving intramuscular injections every five days. This change was followed by improvement both as regards the local and the general reaction.

The temperature-chart, together with the clinical condition of the patient, serves as the sole guide for dosage. Any pronounced rise of temperature of more than twenty hours' duration after inoculation, together with constitutional disturbance, is considered a negative phase, and is a sign for the reduction

of dosage. As a rule, however, the 5-day interval was maintained.

Ross advises beginning with a reasonably small dose, then gradually increasing until a safe maximum is reached. He insists upon the use of the 4-hour chart.

Children, he says, are more sensitive in their reaction to bacterins than adults.

As to the site of injection, a different location, so far as is possible, is selected on each occasion, since antibodies are formed locally at the site of puncture. The calves of the legs and the thighs usually are chosen for the intramuscular injections in children when the development of the arms is poor. The following table gives the approximate doses of the principal pathogenic bacteria employed:

Bacterin	Millions
Staphylococcus albus	100 to 200
Staphylococcus aureus	50 " 150
Streptococcus pyogenes	5 " 20
Pneumococcus	3 " 10
Gonococcus	3 " 5
Bacillus coli	50 " 150
Bacillus typhosus. (Used as a prophylactic inoculation.)	500 " 1000
Bacillus acnes	5 " 10

BACTERIAL TREATMENT OF ACNE VULGARIS

Athole Ross (*Practitioner*, July, 1913, p. 96) had good results from the bacterin treatment of acne vulgaris, 27 cases being treated by him. Of these, 19 patients were cured and 8 improved. For the most part, they were treated with stock bacterins, these usually being either the staphylococcus albus or mixed staphylococcus albus and aureus; but the bacillus acnes also was employed, together with the white staphylococcus.

The majority of his cases were of the frankly suppurating type, with long histories and where there was severe facial scarring; and in these the role of the staphylococcus assumes much importance. In all cases in which blackheads were found present or the bacillus acnes could be demonstrated, a stock bacillus acnes vaccine was used in conjunction with staphylococcus albus vaccine. One patient in whom all the lesion conformed to the blackhead type was treated entirely with stock bacillus acnes, and in another instance an autogenous bacterin was used, but with no better results than could be obtained from the stock strains.

The most generally suitable dose is from 5,000,000 to 10,000,000 bacilli. Ross asserts that a tendency to relapse is common in cases of facial acne, but these patients nearly always derive much benefit from the treatment. If a second or third course is found necessary, the patients rarely are as bad as when treatment was begun and respond very readily to a smaller number of injections.

THE RELATION OF AUTOINTOXICATION TO INSANITY

In a paper on "The Relation of Autointoxication to Certain Psychoses," Dr. W. D. Partlow (*Southern Medical Journal*, Dec., 1912) says that, except in the totally degenerate, idiotic, imbecile, feebleminded and paranoiac types, insanity is viewed, usually, not as the effect of some one specific cause, but rather as the result of a combination of causes partly predisposing and partly exciting.

In those individuals who possess the underlying predisposition, autointoxication is by far the most prolific and most prevalent exciting cause of psychoses, disturbing as it does their delicate mental balance, thus precipitating attacks.

While autointoxication appears to be almost the sole exciting cause in only a few groups of the very prominent psychoses, aggregating a minority of the total of such patients treated, the author believes that it plays an important role along with the many other etiologic factors in precipitating a large majority of the psychoses. So evident is this that, as a routine, the greatest active effort at therapeutics is along lines looking toward the correction and relief of autointoxication.

FUCHSIN IN IMPETIGO AND OTHER PUS INFECTIONS OF THE SKIN

For the treatment of impetigo in children, Triboulet advises the local application of fuchsin (*Le Nourrisson*, 1913, No. 1), the solution he employs being that generally used in the laboratories for the staining of Koch's bacillus; viz.:

Fuchsin	Gm. 1
Absolute alcohol	Gm. 10
Phenol	Gm. 5
Distilled water	Gm. 100

After having softened the crusts by means of hot compresses, Triboulet applies to each lesion a cotton tampon wet with the fuchsin lotion; this application being repeated daily. This dries in place, forming a reddish film, which effectually isolates the impetiginous elements from contact with the air. It is not unusual to see the crusts shrink to the point of becoming punctiform in eight, or six, or even three days. When reaching this size, the last vestige of the eruption can be

removed by placing a small drop of the fuchsin lotion upon the cicatrix thus uncovered.

While this preparation easily overcomes impetigo, it should not be applied to an impetiginous or recent eczema. However, this treatment can effectively be employed also in ecthyma, in the confluent and penetrating crusts of varicella, in infected pemphigus, and in the diverse pyodermatites. Aside from showing so prominently on the skin, there is no other objection to the fuchsin, except that it is very penetrating and stains the clothing. This inconvenience, however, should not prevent its employment in the troublesome affections of the nursling.

THE BACTERIN TREATMENT OF BOILS

In the July number of *The Practitioner* (p. 96) Athole Ross reports 80 cases of boils, infection being due to the staphylococcus pyogenes aureus, which were treated with bacterins. Of this number, 48 were cured, 12 improved, 2 relapsed, 3 were benefited, and the remainder defaulted in completing the course. In nearly all these cases, the patient had proved resistant to the usual surgical measures, and the majority had suffered for six weeks or more, and in some instances for several years.

In the 48 cases in which the cure was complete, stock bacterins were used 36 times, and autogenous bacterins, 12 times. Ross asserts that "good stock staphylococcus-aureus vaccine is more often than not quite successful in cases of furunculosis."

PICRIC ACID AND CAMPHOR IN THE TREATMENT OF RINGWORM

Agnes Savill, writing in *The Practitioner* (July, p. 94), states that for the last year she has used the picric-acid and camphor lotion, as advised by Williams, in practically all cases of ringworm seen at the Women's Hospital for Children and the Fitzroy Square Skin Hospital. She has a record of 50 cases, and acquired a reputation of being able to cure the disease within three weeks. The formula of the solution employed is as follows: Picric acid, 14 grains; camphor, 1 ounce; alcohol, 1 ounce.

Before applying this lotion, the hair should be cut around the diseased patch; and it is quite important that, when the scalp is concerned, it should be cut short two or three times a week, so that the lotion can penetrate to the skin. The remedy is painted on with an ordinary camelshair brush morning and evening. In about three or four weeks the hair becomes loose and can readily be removed with an epilation-forceps.

THE BACTERIN TREATMENT OF CARBUNCLE

Athole Ross, in *The Practitioner*, July, p. 96), reports 14 cases of carbuncle treated with bacterins. Of these 14 patients, 8 were cured, 3 failed to carry out treatment, and 3 ended fatally. A reliable stock vaccine was employed, as a rule. In the majority of instances, the presence of the staphylococcus-aureus was confirmed by culture before the vaccine treatment was undertaken.

As Ross points out, the subjects of carbuncle usually are elderly individuals and in bad general health. It is his belief, therefore, that the results given are unusually satisfactory. Of course, the usual surgical and medical measures should also be employed.

CAMPHORATED WATER VS. THE OIL FOR HYPODERMIC MEDICATION

Inasmuch as the use of camphor (in the form of the oil-solution hypodermically administered) appears to be gaining in favor, and more particularly so as a remedy in pneumonia, as also in infantile intestinal troubles, the studies of H. Leo, published in the *Deutsche Medizinische Wochenschrift* (1913, p. 591), may be of interest.

Dr. Leo, after extensive investigations, has arrived at two conclusions, as follows: (1) A saturated aqueous solution of camphor acts exactly like the oil. (2) The response is far more prompt. (3) Parallel results are obtained from relatively much smaller doses of the drug; that is, when the camphorated water is introduced into a vein. (4) Action is fully as persistent. The intravenous injections, it should be stated, however, were so far performed on animals only.

The best method for obtaining a saturated solution of camphor in water, as evolved by the author, is, to add a surplus of finely powdered camphor to a cold Ringer's solution (used for biologic experiments) and agitate this for several days in a revolving shaker. After filtration, the proportion of camphor held in solution is 1 : 500. When warmed, this water turns turbid, the substance being less soluble at elevated temperatures.

Ringer's Solution.—The formula for this solution (also termed Ringer's mixture) given in Dorland's Medical Dictionary (1912) does not agree exactly with that published in the

Pharmazeutische Zentralhalle in 1911 (p. 51), in which latter the proportions are as follows: CaCl 0.24; KCl 0.42; NaCl 7.50; water, 1000 Cc. See also page 591, July issue of CLINICAL MEDICINE.

PRINCIPLES OF THE TREATMENT OF GONORRHEA

In a review of the subject of the diagnosis and treatment of gonococcic urethritis and its complications, Carl Bruck, of the Dermatologic Clinic at Breslau, arrives at the following conclusions, as published in the *Therapeutische Monatshefte*, 1913, page 1:

Modern, rational treatment demands: (1) Destruction and removal of the gonococci, without causing, if possible, an increase, yet positively not suppression of the inflammation of and secretion by the mucosa; i. e., bactericidal therapy. (2) After positive elimination of the gonococci, overcoming the remaining clinical symptoms; i. e. astringent therapy. The former object is attained best by means of silver-ablumin preparations, because of their several well-known properties, foremost among these being their certainty, penetration, and total absence of astringent, anticongestive action.

Hence, in practice, the procedure should be: (1) The careful injection, by experienced men, of silver-albumin preparations, among which the author mentions favorably argonin, protargol, hegonon, and argentum proteinicum (Heyden). (2) Cautious transition to antiseptic and mildly astringent treatment, in order to destroy any remaining gonococci and to moderate gently the inflammatory process; silver nitrate, ichtargan, albargin, and argentamin being named as among the proper agents. (3) Completion of the cure by purely astringent (not antiseptic) remedies, these including zinc sulphate, alum, bismuth subnitrate, and the like.

Internal medication with the recognized antigonorrheics (the balsams, etc.) the author considers purely in the light of supportive treatment, sole reliance upon the same constituting a grave mistake.

The fact that the silver-therapy as outlined occasionally miscarries the author seeks to explain by assuming an individual resistance to the preparation of the particular gonococcus-brood attacked (either specific, or perhaps acquired during the treatment), so that the cause of failure would be a biologic one, and not pathologic-anatomic. He is inclined to doubt the value of the thermotherapy that has been suggested, that is, to induce thermopenetration by means of the thermophore.

While the author says nothing about the use of bacterial vaccination, the value of this expedient in gonorrhea should not be lost sight of. In intractable cases and in the complications the gonococcus bacterins should practically always be resorted to.

HEXAMETHYLENAMINE IN SURGERY

A. C. Burnham (*Med. Record*, July 5, 1913, p. 15) is of the opinion that hexamethylenamine may, and does, break down in alkaline solution, especially when there is stasis of the solution and it is at body temperature, In this belief, he takes issue with some of those who in recent years have asserted that this remedy is effective only in an acid medium.

"In chronic cystitis," Burnham declares, "especially when this is due to an enlarged prostate, it is of great value." He has seen the drug given under such conditions for a period of several years without any ill effects. He would not expect very satisfactory results in tuberculosis of the bladder, but personally has never seen it used in this condition.

Before catheterizing, before all instrumentation, before every operation, following every wound of any part of the genitourinary tract, hexamethylenamine should be given in full doses. From about four to six hours before cystoscopy, 10 grains of the drug should be given, and again 7 ½ grains one hour before beginning instrumentation. Thereafter, for 48 hours, give 7 ½ grains of it every four hours.

Dr. Burnham quotes the experimental work of Crowe, to show the value of this drug in meningitis. Its prophylactic value is especially marked. Crowe reported 35 cases of compound fracture of the skull in which hexamethylenamine was given as a routine, without a single case of meningitis following. When the disease has developed, however, its value probably will be less marked.

Closely related to its action in the cerebrospinal fluid, is its application to otologic practice in the prevention and treatment of mastoiditis and disease of the middle ear. It has also been recommended in rhinitis and in infection of the gall-bladder, as also in acute cholecystitis. The presence of the drug has always been demonstrable in the sputum, in the saliva, in the blister of zoster, and in other secretions.

The dosage varies being from 20 to 40 grains daily up to 200 to 300 grains. It should always

be given well diluted, about one glass of fluid being administered with every 2 grains.

THE PRESENT STATUS OF FRIEDMANN'S CONSUMPTION CURE

In view of the popular interest in the Friedmann method of the treatment of tuberculosis, the following statement from the Berlin correspondent of *The British Medical Journal*, is presented without comment:

"The report by Westenhofer, prosector at the Pathological Institute of the Charité Hospital, made to the last meeting of the Berlin Medical Society, of his postmortem findings in a case that had died of hemoptysis after a course of injections by Friedmann, produced a considerable sensation. There were numerous pulmonary cavities and a generalized miliary tuberculosis; but this is not the worst, for in the gluteal region, at the site of the infection, and in the musculature, where tuberculosis deposits are exceedingly rare, there was a large focus containing giant cell-systems and tubercle-bacilli which could not be definitely classed either among the human or cold-blooded varieties.

"In the course of his remarks the speaker regretted that Dr. Friedmann had not as yet fulfilled his promise to the society to publish his culture methods in detail—a course, which he maintained, could only damage the high esteem in which German scientific research was held abroad.

"He was followed by Prof. Schwalbe, who drew the society's attention to an official report of the Health Department at Washington, in which it was definitely stated that the patients treated by Friedmann in America had not been cured.

"The well-known bacteriologist Frau Dr. Rabinowitsch showed the society a pure culture of Friedmann's turtle tubercle-bacillus recently sent to her from America. It had been obtained from an abscess produced by inoculation in a female patient in Rhode Island. Besides the tubercle bacillus, there was cultivated from it a nonacidfast bacterium, which might possibly be designed to act in combination with the other. In her opinion, the first-named very closely resembled a bacillus isolated from the carp, by Dubard, fifteen years ago.

"Friedmann's bacillus grows best at room-temperature and can be subcultivated on all the usual media, while microscopically and by staining methods it cannot be differentiated from the recognized 'reptilian' tubercle-bacillus.

"She reminded her hearers that Küster, Mœller, and Edwin Klebs had fruitlessly tried to immunize animals some years ago with such bacilli, and mentioned that she herself had also failed. Piorkowski, a former assistant of Friedmann's, who had formerly cultivated turtle tubercle-bacilli for him, has placed living cultures of this bacillus at the service of his colleagues in Berlin and elsewhere. At this meeting, he stated that he had received favorable reports from certain sources, while other authorities had been unable to send him any positive observations.

"Friedmann found his only firm supporter in the person of Dr. Schleich, of local anesthesia fame, who from the beginning has publicly stated his belief both in the man and the method. Schleich stated again that most amazing results had been obtained by Friedmann, and called upon the Society to appoint a commission from among its members to examine into, and report upon, his alleged cures."

HOW SHALL WE DEAL WITH THE TYPHOID-CARRIER?

The evidence is accumulating that the most fertile source for the dissemination of typhoid fever is the human "carrier." According to Houston (quoted, *Brit. Med. Jour.*, July 12, 1913, p. 78), the proportion of carriers in the ordinary population is about three or four per one thousand. Dr. Houston believes that, if the immediate cause of what we recognized as water-epidemics in the past should be precisely ascertained, we would find that mostly there had been accidental infection of the water supply by such carriers.

The problem is, How shall we deal with them—or, rather, with her; since Schottmueller (*Jahrskurse f. Aerztliche Fortbildung*, Oct., 1912), has shown that typhoid-carriers are nearly all of the female sex.

There are those who advocate recourse to a surgical expedient; for instance, Dehler (*Muench. Med. Woch.*, April 16, 1912) advocates cholecystotomy, with prolonged drainage, or, better still, entire removal of the gall-bladder, this being the seat of growth of the typhoid-bacteria in most of these individuals; Dehler claiming that this is the only efficient method of effecting a cure.

On the other hand, some experimental work has been done with typhoid bacterins. At the meeting of the Congress on Hygiene and Demography in Washington last fall, A. C. Abbott, of Philadelphia, stated that his assistant was carrying out experiments in

this direction, and was getting encouraging results.

Hexamethylenamine-tetramine is a remedy suggested for the treatment of carriers, since this is known to be an efficient sterilizer of the urinary tract, through which many of the bacteria are excreted. This remedy is also a quite efficient intestinal antiseptic, and it is possible that it may penetrate even to the gall-bladder. Certainly it is worthy of a trial. There is a field here deserving of careful study.

CHRONIC AMEBIC DYSENTERY

A. Chauffard, in *The Presse Médicale* for May 14, (Cf. *N. Y. Med. Jour.*) assures his readers that the possibility of amebic dysentery being present in temperate climates should constantly be kept in mind, as not infrequently cases of this character do occur. He reports his experiences with a patient who had amebic dysentery during his boyhood in Turkey, and eighteen years later in France there was a recurrence of his old trouble, apparently brought on by an ordinary attack of simple diarrhea.

The amebic character of the disease being promptly recognized, emetine hydrocloride was administered, to the amount of 5 grains in a week. The temperature promptly fell and the number of stools decreased, until on the fifth day there was no movement at all. The patient promptly regained his former health.

ANTITYPHOID VACCINATION IN THE FRENCH ARMY

From *La Province Médicale* (April 26, 1913, p. 185), we learn that during the time antityphoid vaccination has been practiced in the French Army (since January, 1912) 62,786 vaccinations have been made among the troops at home and in Algeria and Morocco. This prophylactic method has been shown to be free from harm, while it insures remarkable protection to the soldiers, who have submitted themselves voluntarily to the treatment.

Statistics show that in France no case of typhoid fever has been observed among those thus vaccinated, who on December 31, 1912 numbered 37,140. In Algeria-Tunis, among 13,290 vaccinated up to the same time, only one case of typhoid fever was observed, this being in a soldier coming from Morocco. In eastern and western Morocco, the results are shown in the statistics following below, which also include cases in which after laboratory verification, a large proportion do not appear to be justly classified as typhoid—representing, rather, cases of paratyphoid fever, mild gastric disturbances, and diverse pyrexias.

The morbidity and the mortality as to typhoid fever in eastern Morocco were: Vaccinated: Morbidity, 0; mortality, 0; not vaccinated: morbidity, 38.23 per 1000; mortality, 5.51 per 1000. In western Morocco the morbidity among the vaccinated was 2.96 per 1000; the mortality, 0.09 per 1000. Among the unvaccinated, the morbidity was: 168.75 per 1000, the mortality 21.29 per 1000.

Knowing the average morbidity and mortality of typhoid fever in the metropolis, Algeria-Tunis, and Morocco, one may estimate that antityphoid vaccination has saved France, among the 62,786 soldiers vaccinated, 2101 attacks of typhoid fever and 266 deaths during the single year of 1912.

THE VALUE OF EMETINE IN LIVER ABSCESS

S. Mallannah, in *The British Medical Journal* (June 7, p. 1207), tells of a severe case of amebic dysentery occurring in a woman of 40, an alcoholic. The trouble began about a year ago, and since that time the patient had suffered from diarrhea. About four months ago she began having chills and fever and soon after, on three different occasions, a hepatic abscess was emptied by aspiration. However, the pus continued to collect, and opening of the abscess was suggested; but on account of her weakness the patient declined to submit to the operation.

On March 13 Dr. Mallannah found the patient extremely debilitated, emaciated, and with marked enlargement of the liver. She complained of severe throbbing in the liver and was unable to lie on the right side. She was having about five liquid stools daily, was unable to sit up or move in bed, suffered from nausea, and was unable to take food.

Emetine in ¼-grain doses now was prescribed, to be given, in solution, thrice daily. Within one week the patient's temperature came down to normal, and remained thus; the diarrhea stopped and the pain in the hepatic region diminished. The swelling gradually began to grow less, and in a month the liver had returned to its normal size. Appetite returned, the anemia disappeared, the patient began to gain weight, and soon was able to be about. Altogether, the patient received 21 grains of emetine.

Dr. Mallannah publishes this case, he affirms, to emphasize two facts: first, that emetine is effective in amebic infection even when suppuration already has taken place, and, second, that it acts efficiently when given by the mouth.

EMETINE IN DYSENTERY

At the meeting of the Societé Médicale des Hôpitaux (*Gaz. d. Hopit.*, May 20, 1913 p. 906), Chauffard reported the case of a young woman of 28 years who contracted, in Dahomey, a disease characterized by paroxysms of diarrhea that did not seem dysenteric with glary stools, but, no pain or tenesmus. At the end of two months she returned to France, nearly cured.

On May 5, 1912, the woman was taken with violent pains in the right side of the hypochondrium, these radiating toward the shoulder. Her temperature was found to be 39° C., and the general condition bad. The following day she had violent attacks of cough, experienced a tearing sensation, and vomited greenish-looking pus. During the month of June she suffered from slight hemoptysis, this causing a fear of pulmonary tuberculosis; but there were no other signs, and later the hemoptysis seemed to be cured. February 15, 1913, a new attack of vomiting occurred, bringing up chocolate-colored pus; and for a month bloody pus was expectorated.

The patient entered the hospital on April 14. Signs of abscess of the liver were evidenced and dysenteric abscess was diagnosed. With the aid of an aspirator, 650 Cc. of yellowish liquid was withdrawn, and this gave the Gmelin reaction also. The presence of amebae also was established. By way of treatment, the patient received 4 grains of emetine, which large dose was well tolerated, and the temperature went down as a consequence.

Dr. Chauffard thinks that there had occurred a successive opening into the bronchi of two dysenteric abscesses. At the present time there exist a granulating, caseating abscess, the bile having exerted a sterilizing action. These factors appear to support the opinion expressed by Dopter, that the action of emetine as solely to influence deleteriously the pathogenic amebae.

RHEUMATOID ARTHRITIS: NATURE AND TREATMENT

The current English journals contain numerous articles upon rheumatoid arthritis. There seem to be two fashionable schools, at the present time, regarding its nature and treatment. The first, represented by Sir James Barr, presents the theory that these patients are suffering from acidosis, with associated extraction of the lime salts, to which condition we must ascribe the thinning of the bones and erosion of the cartilages, effusion into the joints, swelling of the fibrous tissue, wasting and weakness of the muscles, and neuralgia and neuritis.

The second school of clinicians looks upon rheumatoid arthritis as distinctly an effect of autointoxication, the toxin being produced as the result of bacterial infection at some point more or less remote. Many cases are ascribed to pyorrhœa alveolaris; others to gonorrheal infection; others to leucorrhea; still others, to absorption from enlarged, chronically inflammed tonsils. Those who hold to the second theory generally advocate the use of autogenous bacterins, and the remedies of this class have certainly been employed in many cases with remarkable results.

To an American looking on at a safe distance, there seems no necessary incompatibility between these two theories. The calcium starvation and the lowered metabolism may present just the conditions favorable for the malign influence of the toxemia. The ideal treatment would seem to combine local treatment to the focus of infection, general reconstruction with lime salts, and proper (alkaline) agents to correct the acidemia, in connection with suitable autogenous bacterins. Here is a field for some fine clinical work in which we hope the readers of CLINICAL MEDICINE will become interested.

ORAL SEPSIS AND GENERAL TOXEMIA

The British journals are devoting considerable attention to the relation subsisting between pyorrhœa alveolaris and the occurrence of disease in other portions of the body. For instance, it is now believed that many cases of arthritis deformans originate from septic states in the mouth, and W. Hale White (*Lancet*, May 24, p. 1440) makes the statement that some diseases of the eye may be owing to pyorrhœa.

In the treatment of diseases of this kind, therefore, it is of importance to give proper attention to the oral conditions. Diseased teeth and gums should receive proper attention at the hands of the dentist; while, in addition, good results are claimed from the administration of autogenous bacterins. It

is even asserted that in some cases victims of rheumatoid arthritis have been cured by bacterins prepared from oral cultures.

Discussing the subject of oral sepsis in *The British Medical Journal* for June 14, Arthur Mills divides into six groups those diseases in which septic conditions of the mouth act as an etiologic factor, these groups including, respectively, (1) cases of indigestion associated with anemia, (2) disorders of menstruation, (3) vomiting in pregnancy, (4) the climacteric, (5) localized suppuration, (6) arthritis. A number of interesting examples are cited in support of this view. In a large majority of these cases of oral sepsis, he points out, pallor of the skin and mucous membranes has been well marked.

Dr. White concludes that a septic oral cavity exerts a far-reaching influence upon general health; that the condition is a common cause of disorders of the stomach and of the different forms of arthritis; that at the critical periods of life of the individual, as, for example, at puberty, during pregnancy, at the climacteric, or in the course of chronic disease, it may be the all-important factor in the case.

In the same number of *The British Medical Journal* (June 14), Basil Hughes completes the indictment against septic conditions of the mouth (pyorrhœa alveolaris in particular) as regards its etiologic importance in rheumatoid arthritis. Aside from local treatment, Hughes also emphasizes the value of autogenous vaccines.

In order to get a suitable culture-medium, he says, the mouth should be washed thoroughly and the teeth scrubbed on two or three consecutive days with a normal saline solution free from antiseptics, in order to get rid of extraneous matter from the teeth. At the end of three days a small quantity of pus is squeezed up from the gum, a slide is taken, and agar tubes are inoculated.

CHOLELITHIASIS: ETIOLOGY, DIAGNOSIS, TREATMENT

In a paper read before the Royal Society of Medicine, W. Bain (*Brit. Med. Jour.*, Dec. 20, 1912, through *Muench. Med. Woch.*, 1913, No. 15) argues that the largely accepted theory of the bacillary origin of gallstones does not apply invariably, pointing, for instance to typhoid fever, which despite the enormous invasion does not engender the trouble. Among some of the other important contributing factors, he mentions biliary stagnation, digestive disturbances, and mental depression. Furthermore, Dr. Bain is strongly of the opinion that medicinal treatment often may prove curative if the condition is recognized sufficiently early. And this should be the aim of the doctor.

As an aid to prompt diagnosis, the author —with whom several of the members present agreed—supplies this general clinical picture that should lead to a closer study: dyspepsia and concomitant intestinal gases, acid eructations, sensation of pressure and weight over the stomach, coated tongue, pain in the epigastrium after food ingestion together with idiosyncrasy against certain kinds, lassitude and somnolency, constant sensation of pressure in the right hypochondrium; besides—and of great diagnostic value, and never absent—sensitiveness to digital pressure in the region of the gall-bladder.

Treatment, naturally, must be directed against any gastrointestinal faults discovered, especially seeking to improve the digestion, inasmuch as it is now held that, ordinarily under aseptic conditions, concrements in the gall-bladder are disintegrated by healthy bile. Obviously, only after restoration of healthy digestion will further medication be in place; among these being the bile-salts and hexamethylenamine.

In this connection, one of the critics spoke highly of the laxative mineral waters. That our present irrational mode of living and eating is the real cause of this trouble, is demonstrated, he thinks, by the fact that biliary concretions are of extreme rarity in the animal world.

Dr. Bain does not speak of sodium succinate, which so many American physicians have found clinically curative of gallstone-disease. Best results are obtained when it is employed in conjunction with boldine and the bile-salts, the bowels being kept free with laxative salines.

HAIRINESS: ITS TREATMENT

We have eight methods at our disposal for the removal of superfluous hair, according to Douglas Freshwater (*Practitioner*, May, p. 825), these being respectively, (1) plucking, (2) shaving, cutting, singeing, (3) x-ray, (4) depilatories, (5) hydrogen dioxide, (6) pumice-stone, (7) Kromeyer's method, (8) electrolysis.

As regards the first two, they have little to recommend them to the physician. The x-ray is effective in producing permanent epilation over an area, but numerous exposures are required, with danger of causing

dermatitis, a parchment-like condition of the skin, pigmentation, and telangiectases.

Depilatories are largely employed, but they do not destroy the hair-root, and therefore can not be depended upon for permanent removal of the hair. Among the substances formerly most utilized for depilatory purposes, the following may be named: Orpiment (sulphuret of arsenic, or yellow arsenic), but this nowadays is little used. Calcium sulphide and anhydrous barium sulphide also are used, and are less intense in their action than is sodium sulphide. Redwood's paste consists of a concentrated solution of barium sulphide, with starch enough to make a paste. Duhring's depilatory, which is one of the best, consists of barium sulphide, 3 drams; powdered zinc oxide, 1 ounce; starch, 1 ounce. At the time of its application enough water is added to make a paste, which then is spread over the hairy part and permitted to remain two or three minutes, when a sensation of heat or burning is felt. It is then quickly removed by scraping with a smooth wooden spatula and the thin skin thoroughly washed with warm water. When the skin is dry, it should be freely enointed with cold-cream—prefeably the old-style, official, variety.

Hydrogen dioxide is used as a bleach where the hair is perceptible but too fine to permit of its removal by electrolysis. Besides its bleaching properties, it has a destructive action on the fine hairs, which after a time become brittle and break off, thus producing a still further improvement in appearance. It also retards the growth of the hair, having its vitality impaired, so that sometimes it stops growing altogether.

Hydrogen-dioxide solution is a harmless remedy for home use, and is of special value to brunette women afflicted with fine dark down on their upper lips. It may be employed in the form of a cream for night use or be dabbed on while one is dressing in the morning. After a few applications the hair is bleached white, after which an occasional use is sufficient.

An effective peroxide cream consists of hydrogen dioxide (perhydrol), 2½ drams, and lanolin, 6 drams. This fatty mixture is less rapid in its action than the plain dioxide, but is not so troublesome to apply. Before applying hydrogen-dioxide fluids, greasy substances should be removed from the hair with a mixture of ether and alcohol. Sodium-peroxide soaps are available, and these also are of value for bleaching purposes.

Pumice-stone sometimes is useful. In the cases of hair on the chin or lip, the latter first should be shaved closely. Then, selecting a piece of pumice-stone without rough edges, this is rubbed gently against the hirsute growth over the part to be treated; doing this for a few minutes twice daily, and avoiding too much severity. After this rubbing, a little cold-cream may be applied. After six months' daily use of the pumice-stone, a rest of a month is enjoined, in order to see the effect on the hair growth. Often the growth will be found to be weaker than previously, finer hairs replacing the thick pigmented growth. At the end of a year's treatment, sometimes the hair will be practically destroyed.

Kromeyer's method consists in punching out the hair-roots together with a little cylindrical piece of skin. The method is so severe that it has little to commend it.

Electrolysis undoubtedly is the best method for the complete removal of superfluous hairs when they are coarse, single, and sparsely distributed. The method is not suited to the removal of fine, downy growths or over extensive areas. It is tedious both to patient and operator, and not more than 20 or 30 hairs can be removed at one sitting. The constant current is the form utilized, the needle being attached to the negative pole. The region to be operated upon should first be thoroughly rubbed over with ether, to remove all grease and dust from the mouth of the hair-follicles. After each treatment, the patient should be instructed to bathe the face with hot water and anoint it with cold-cream, or to apply some antiseptic evaporating lotion.

NEW CURES FOR VENEREAL DISEASES

At the Scandinavian Dermatologic Congress held in Stockholm, Prof. Ehlers of Copenhagen, reported (*Pharm. Notisbl.—Sweden—through D. A. Apoth.-Zeit.*) the successful treatment of syphilis, in 211 cases, with injections of mercury-benzoate solutions. The remedy is administered intramuscularly, and, it is claimed, a single injection will effect a cure if the disease has not as yet entered the circulation.

At the same Congress, another physician, Dr. Jersilds, made known a new method of rapidly curing gonorrhea, destruction of the gonococcus being possible in six hours (?) where the infection is of less than seven days' standing. The treatment consists in the local employment of a copper salt by electrophoresis.

MISCELLANEOUS ARTICLES

Experiences with Bacterins

THE greatest discovery and most effective means for the conquest of disease, since the acquisition of diphtheria antitoxin, is that of the bacterins. That this class of preparations has come to stay there can be absolutely no doubt, as the following examples, taken from my practice, will amply testify. Each one of the cases to be discussed is known to one or more of my colleagues and, with the exception of the two acute cases, all the patients had been under the regular treatment for their respective conditions for two or more years. The bacterins employed were the well-known suspensions of sterilized pathogenic bacteria in normal-salt solution; they produce immunity by increasing the germ-destroying power of the blood.

Case 1. Mrs. J. S., came to me on March 31 last. She gave a previous history of gallstones, having passed great quantities at different times. For the previous years or longer she had been having chills, fever and sweating at irregular intervals of from a few days to two weeks. Her ill health dates from four years back. The sweat was followed by an urticarial rash on the skin. When this rash failed to appear after the sweat, the chill would reappear again and again, until at last the sweat was followed by urticaria; then relief until the next paroxysm. Physical examination showed nothing unusual. The diagnosis was chronic catarrhal angiocholitis.

By way of treatment, one dose of bacterins was given hypodermically every seven days, the last one being administered on May 20. After the first dose the patient had one very faint chill that lasted a few moments. Otherwise she has been free from the symptoms from the first day of the treatment, March 31, up to the present. Some medicine was given internally, but no reliance was placed upon that to effect a cure. The vaccine in this case contained streptococci, pneumococci, and colon bacilli.

Case No. 2. Mr. M., age 22. He was a perfect specimen of physical manhood but for a chronic gonorrheal cystitis, as evidenced by a dull aching over the pubic region, irritability of the bladder, and cloudy urine that contained shreds; besides vague and migratory pains over the various joints, back and hips. This patient told of having contracted gonorrhea about four years ago, which had resulted in stricture, the treatment for which was divulsion.

This patient received 9 doses of bacterins containing gonococci and staphylococci, at six days' interval, followed by complete relief of all the symptoms.

Case 3. At the present time I have under my care a woman afflicted with gonorrhea of four years' standing. I saw her for the first time March 19. She has received 12 or 13 doses of bacterins containing gonococci, staphylococci, pneumococci, streptococci, and colon bacilli. (There was a mixed infection.) The discharge from the vagina has nearly ceased, as have also the soreness and the inflammation which accompanied it. I have neglected to treat by local means an accompanying urethritis, but have begun doing so, and with beneficial results.

Case 4. Mr. Y., about 18 years old, was seen at my office March 13. There were present a nasopharyngeal catarrh associated with profuse watery discharge from the nose, besides granular elevations on the posterior wall of the pharynx and swelling of the tonsils. This patient (like the preceding) had been under treatment, locally and constitutionally, and suffered many things from many doctors. He received 9 doses of bacterins in all, at six days' interval, followed by a cessation of the discharge and an apparent return to normal of the pharyngeal mucous membrane.

Case 5. J. H., middle-aged, applied to me for treatment for a carbuncle on his neck of four weeks' standing. A dose of bacterin containing streptococci and both varieties of staphylococci was administered hypodermically. Five days later the patient returned for a second injection. The pain and soreness were gone and the tumor was reduced

to half the original size. After the second dose, total disappearance of the tumor occurred within five days.

Case 6. Mr. B., aged 15 years, complained of soreness and stiffness in the right knee. Previous to this he had had tonsillitis. His temperature was 102°F. Forty-eight hours after the injection of streptococcic bacterin all signs of inflammation disappeared and the patient was able to be around and play. Two weeks later, the patient had a relapse, the ankle-joint and that of the large toe being swollen. The bacterin treatment was resumed, one dose given weekly. (Eight doses were given in all.) The patient is improving in general health and on the way of recovery.

Case 7. Mr. C., aged 15, ill with lobar pneumonia. A bacterin containing streptococci and pneumococci was given hypodermically. Great improvement in respiration, circulation, temperature, and so on, was apparent in twenty-four hours. A second dose was given on the third day. On the fifth day the crisis set in and the patient had a violent attack, respiration being at the rate of 70 times a minute, besides other alarming symptoms. He recovered.

In this case, I consider the second dose of the bacterin responsible for the early and violent crisis, through an overstimulation of the immunity-producing apparatus of the organism. The lesson to be drawn from this is, never to repeat a dose of bacterin too soon after its administration, unless the desired results fail to appear—namely, an observable alleviation of the symptoms. I am not very positive in this opinion, being based, as it is, on only a single experience, while it is contrary to the teaching of those who have had a much more extensive experience in the use of bacterins.

I could proceed, enumerating other cases treated with these agents, such as bronchopneumonia, suppurative otitis media, infected wounds, boils, parasitic eczema, puerperal fever, and so forth; however, I have elected to limit myself to those conditions in which the results were truly remarkable and could have been secured by no other form of known medication.

I have refrained from mentioning the dosage, inasmuch as this information really is immaterial and may easily be obtained by looking over the literature on the subject.

MICHAEL SHADID.

Carter, Okla.

[Bacterins are often of extreme value, and we hope others will give their experience with them. But the best results are obtained by associating *all* indicated remedies.—ED.]

HEREDITY AND TUBERCULOSIS

In the July issue of CLINICAL MEDICINE, there appeared a very interesting account of a recent lecture on "Tuberculosis, Heredity, and Environment" by Professor Karl Pearson, Galton Professor of Eugenics at the University of London. Since the general tenor of this lecture is somewhat pessimistic and since Dr. Pearson's conclusions are rather unfavorable to the sanatorium treatment of tuberculosis, I take the liberty of discussing at least some of his remarks. I think it only fair to preface my remarks by pointing out that Professor Pearson is not a physician and for this reason his conclusions concerning the etiology of tuberculosis will bear elucidation from a medical viewpoint.

To begin with, I want to make it clear that we must differentiate strictly between tuberculosis, the infectious disease caused by the pathogenic action of the tubercle bacillus and tuberculous phthisis, or consumption, that is, the destructive stage of tuberculosis, into the causation of which other factors besides the tubercle bacillus enter.

There can be no question of a predisposition to tubercle infection, as little as there can be a question of a predisposition to getting wet in the rain. The only effective prevention would be the avoidance of exposure either to infection or to rain; but while the latter may be easy, the former is not. In fact, it is now well known that practically everybody is exposed to infection by the tubercle bacillus and that practically everybody yields to it, at least to the extent of some tubercle being formed. But now the generality of things ends and the question of predisposition arises.

Those persons who are not predisposed develop protective substances in their blood-serum which neutralize the toxins formed by the tubercle bacillus and kill the latter. In those who are predisposed or who do not have a sufficient resistance, a certain degree of tubercle formation will occur, which may be arrested after a time, and for a time.

But, as certain further predisposing or weakening factors enter into play, such as exhaustion, weakening diseases, especially influenza, etc., the tuberculous process will be reactivated and will advance a little further, until finally no more arrestment is possible, the tuberculous process will become

progressive and consumption will declare itself and will eventually lead to death.

The exposure to tuberculous infection is practically universal in civilized countries; the development of consumption out of a tuberculous focus depends upon a predisposition to the growth and multiplication of the tubercle bacillus, and upon a weakness of cell-life, by virtue of which the tubercle bacillus is enabled to exert its harmful action upon the organism.

Pearson is mistaken when he asserts that in actual practice the hereditary factor is almost universally ignored. This was true a number of years ago during the first enthusiastic rise of the bacteriological school, and even then only to a certain extent. For, while the strict bacteriologists attributed to infection almost the only causal importance in the genesis of tuberculosis, the clinician, and especially the general practitioner, never could be convinced that everything depended solely upon the exposure to infection. The importance of the soil was insisted upon, from the beginning, by many authors, and it has recently resumed its proper place as an essential factor in phthisiogenesis.

Discussing the two pedigrees collected by Klebs, among the members of which only 12.5 percent of the mates of consumptives became tuberculous, while 79 percent of the offspring acquired the disease, Pearson argues that, "*if the phthisis in the children be due in the first place to infection from parents or to a common environment, we should anticipate that more than one-eighth of the mates of phthisical individuals would themselves be phthisical.*"

This fallacy has been advanced and refuted these many years ago. The exposure to infection being equal, those who are least resistant to it will naturally be the ones to show the effect of the infection. Infection takes place in all who are exposed; but tuberculous disease occurs only in the relatively nonresistant. Experience shows that children are far less resistant than adults, and they are, therefore, the first to yield to the family exposure. Furthermore, it is now acknowledged that the beginnings of adult-tuberculosis, respectively adult-phthisis, are laid in childhood, and that it develops upon the basis of a tuberculous process the infection for which was acquired in infancy or early childhood and which was held in abeyance until adolescence.

Those remaining free from tuberculosis upon having reached the years of puberty have escaped because of a congenital or acquired resistance or immunity, and it is easy to see why so many more children than mates of tuberculous persons should have become tuberculous; they did not possess such a resistance. The same reasoning explains why there is little use in living "*in widely separated homes and under diverse conditions, flying from the family-curse*" after the family infection has occurred.

Finally it becomes apparent why "*the father is twice as dangerous to the child, if the source be infection, as the husband to the wife.*"

Pearson's conclusion that "*during the years of tubercle bacillus, of sanatoria, and of the fight against tuberculosis the rate of fall in the death rate from phthisis, instead of being accelerated, has been retarded*" cannot be accepted at its face value. I am fully conscious that in the matter of statistics I am invading Pearson's stronghold and that I cannot follow him in this field. However, it has been shown repeatedly in the course of the last decade that the death rate from phthisis has declined more in certain countries since 1882 than in the thirty years prior to that date.

This appears, for instance, from a recent communication on the death rate from phthisis in Prussia, by Professor Fraenkel, to the Berlin Medical Society; it is also suggested by the figures presented, for England and Wales, in the "Report on Sanatoria for Consumption" (by H. T. Bulstrode. London, 1908). In the latter report, I find for the quinquennium 1866 to 70 the phthisis mortality to have been 24.4 per 10,000 living; and in 1881 to 85 it was 18.3. In the quinquennium 1891 to 95, the death rate had fallen to 14.5, and in 1901 to 05, to 12.1

I know quite well that this decrease in the phthisis mortality in England and Wales began more than thirty years before the discovery of the tubercle bacillus, and I am far from attributing it exclusively to the lessons learned from bacteriological research, however important they may have been. Nevertheless I believe that the decline in the death rate has been more rapid since 1882 than it was before that date, at least in some countries or portions of countries.

While Professor Pearson's regret is justified to a certain extent, that "*hardly a single sanatorium in this country* (In England.—Author) *publishes a report from which it is possible to extract information of scientific value as to their efficiency*; and that *this is equally true of other countries*," I submit that many of the sanatorium reports, both here and abroad, contain data that show very clearly the relative efficiency of the modes of treatment followed in those institutions.

At the risk of being accused of speaking *pro domo*, I will mention the biannual reports from the Winyah Sanatorium, in which the results of treatment are discussed at considerable detail. In the report published in 1907, for instance, an inquiry was published according to the results of which 400 out of 602 former patients traced had been dismissed from the institution for periods of from two to ten years, as apparently cured, and 320, or 80 percent of these, had continued without a relapse. Further, 202, on their discharge, had been reported as improved; and 94, or 46.5 percent of these, had continued without a relapse.

The same report contains a comparative tabulation of different groups of patients accordingly as they were treated, since 1888, with or without the aid of specific remedies in addition to the customary sanatorium methods; and the greater efficiency of specific treatment, more particularly of remedies representing the entire body-substances of the tubercle bacillus in solution, is shown very clearly While, unfortunately, not many sanatorium reports do more than give an indication of the number of patients admitted and discharged during the preceding year, there is a number of them in which the working of sanatorium treatment, in its comparative, its immediate, and its remote phases is recorded faithfully.

The foregoing figures also show the injustice of Professor Pearson's doubt that "*sanatoria have in any way prolonged the lives of consumptives in a marked or substantial manner.*" While it is questionable, from a eugenic viewpoint whether such a prolongation of life (taking the term consumption as meaning the terminal, or destructive, stage of tuberculosis, and designating a stage of the disease in which it is all but incurable) is a thing greatly to be desired, it may be pointed out justly that the majority of the incipient cases which, according to Pearson, "*swell the percentage of cured cases and which, in pre-sanatorium days, and no less now, recovered spontaneously,*" are the very ones that would *not* have recovered spontaneously; because a clinically "incipient" case of tuberculosis is in reality one of incipient consumption. These "incipient" cases, then, were the candidates for later progressive consumption and their "recovery," whether transient or permanent, meant an advance in results.

In the present crusade against tuberculosis, which is *de facto* a crusade against tuberculous phthisis, the sanatoria very justly and properly take up the early-stage cases and attempt to cause their arrestment, respectively their cure. They do more. In teaching the patients the laws of correct living and how to protect others from exposure to infection, the sanatoria mediately lessen the number of future cases to an extent which cannot of course, be estimated, but which is nevertheless, not inconsiderable.

Supposing Pearson were right when he says, further, that sanatorium treatment, dispensaries, tuberculin, etc., are but experiments—what of it? Has not the experiment, even the clinical experiment, a legitimate place, and are we not everywhere limited to doing the best we can do? There is not a single line of human endeavor in which our knowledge is a rounded whole, an absolute definite entity. In all different lines, we are obliged to learn from experience, that is, to experiment. The important point is, that we should always obey the *primum non nocere* in our experimentation.

Moreover, I cannot see that Professor Pearson's plan of discouraging the perpetuation of the stocks of consumptives is any more hopeful however correct it may be in principle. How soon can consumptives, who have been called the most salacious and amative of people, be taught that they must refrain, for the good of humanity, from begetting children? "Damn humanity!" will be their reply.

Not but what they are wrong and Pearson is right. The stock of consumptives is, indeed, undesirable from the eugenic viewpoint and should be discouraged. But I maintain that, with all deference to the excellent work done in the Galton Eugenic Laboratories, the present mode of attacking the tuberculosis-problem is condemned unjustly and that it has its proper place in the effective crusade against the disease.

While I am fully in sympathy with Professor Pearson's wish to "*encourage health parentage*" and to receive the records of "*observations in such a manner that the trained mind can ultimately measure their bearing on human welfare,*" I submit that these objects have no present expectation of being attained, while the tuberculosis-problems are very present and very real, indeed; and they must be met and dealt with.

A far better way, for the present, or in the meantime, and one that promises more immediate results, would be, to secure the general vaccination or prophylactic immunization of all children and of all persons who are in the least likely to come in contact with consumptives; that is, at present practically

everybody. This vaccination against tuberculosis has been proved o be quite feasible and to be just as efficient as is the vaccination against smallpox or against typhoid fever. If, let us say, the entire population of Chicago were vaccinated on a given date and, if, therefore, from then on no new cases of tuberculosis would develop and, consequently, no new cases of consumption, except those imported from outside, the tuberculosis problem would be brought in short order very near to its solution and the disease would die out for want of sustenance within a time measurable by the span of a human life. But that is another story.

H. J. Achard.

Asheville, N. C.

HOT-WEATHER AILMENTS

You want our experiences with hot-weather ailments. Here are a few from my own practice, although I have nothing new to offer.

This is my treatment of *intertrigo:* Cleanliness, a daily bath, the free use of borated-talcum powder serve to prevent the trouble; while, for a cure, I clean the affected parts with olive oil (avoiding soap) and then apply resinol ointment.

Urticaria.—A good clean-out with calomel and podophyllin, followed by a laxative saline; then the three combined sulphocarbolates (the intestinal-antiseptic tablet) and calcium lactate. For external use, the old wash of lead-water and opium.

Prickly heat.—A weak solution of copper sulphate, followed by a good dusting powder.

Mosquito bites.—Apply ammonia water or a two percent solution of potassium permanganate. Nothing beats coal-oil for preventing mosquitoes from biting.

Sunburn.—Dress with cold cream containing boric acid. In severe cases use the well-known carron oil, a mixture of equal parts of lime water and linseed-oil.

Diarrhea in babies.—Calomel, 1-10 grain, in combination with aromatics, for ten [hourly or half hourly] doses. If the stools are offensive then calomel and ipecac, 1-8 grain each, for twelve doses, after that the combined intestinal antiseptics; withdraw food, but give plenty of boiled water and thin barley-water. [Too much calomel?—Ed.]

Infantile Colic.—Candler's calmative has given me splendid results.

Cholera morbus in adults.—Begin with calomel and podophyllin, 1-6 grain each, for six doses; then saline laxative; then intestinal antiseptic. If necessary to ease the distress, give a few doses of chlorodyne or Abbott's improved Dover's powder.

Indigestion.—Clean out thoroughly, then give quassia, together with small doses of Lloyd's bryonia and rhubarb; later, milk of magnesia, adding a small doses of carbolic acid. Bland diet.

Emil Simon.

St. Louis, Mo.

IRON AND CREOSOTE INTRAVENOUSLY

In the July number of Clinical Medicine (p. 594) I noticed an article about the use of iron subcutaneously and I was greatly surprised that nothing was said about its use intravenously. I have been using iron intravenously for three years, and consider this the only proper way of administering this drug.

Although I have given many hundreds of intravenous injections containing iron, I have never thus given the iron alone, but always in combination with calcium and creosote or other drugs. And, by the way, I want to say that this is the only best way to administer creosote—that is to say, to give it intravenously; though not necessarily with iron and calcium. I had entirely given up the use of creosote for tuberculosis until I learned that it could be employed to good advantage intravenously.

I treat a good many cases of tuberculosis by the intravenous method, and I am satisfied that very often I get good results that I could get by no other means. The solution of creosote is too irritating to be given subcutaneously, while a slight local phlebitis ensues after frequent intravenous injections; but this is avoided if a different vein is chosen each time. However, no permanent harm can follow, and the phlebitis is of no consequence when considering the vast benefits derived from the treatment.

By this treatment I have achieved results that were almost beyond belief, especially in respiratory diseases. I have used iron, calcium, creosote, several preparations of mercury, salicylic acid, salicylates, nuclein, magnesium, sodium, and potassium intravenously. The high temperatures of tuberculosis can better be controlled by intravenous treatment than in any other way.

I wish you would give us the experiences and formulas of some of the doctors who are having success with intravenous treatment.

H. O. Wells.

Fort Wayne, Ind.

[For the good of the family, we hope Dr. Wells will tell us just how *he* prepares his hypodermic solutions, in what dosage he uses them, and give us case histories enough to throw light upon the reactions to be expected and the clinical results following.

Hypodermic and intravenous medication are growing in favor. There is no doubt that iron given subcutaneously is effective, but the pain and local reaction are often so great as to more than outweigh any advantages over internal medication. However, the hypodemic syringe is bound to be used more and more as a means of giving drugs of all kinds, especially when these drugs are concentrated and potent. Will not other readers of CLINICAL MEDICINE come forward with suggestions?—ED.]

IS THE ALOIN-ATROPINE COMBINATION IRRATIONAL?

Permit me to call your attention to the mistake of combining aloin and belladonna (or atropine) as now is well-nigh universal. I have referred to this matter in one of my papers printed in CLINICAL MEDICINE; nevertheless, you repeat the same error in your April editorial on "The Significance of Elimination," where you say: "Thus, if we take a combination of aloin to increase peristalsis, emetine to increase the intestinal secretions, atropine to relax the circular muscular fiber of the intestinal coats."

The atropine is added to prevent the griping caused by the tonic contraction of the muscular fiber, the latter action being the essential one of the aloin in causing peristalsis. The atropine, therefore, counteracts the aloin by relaxing muscular fiber. This combination is irrational.

I. L. NASCHER.

New York City, N. Y.

[We fear that Dr. Nascher's objection is based upon theoretic grounds mainly. In practice, the combination is one of our most effective ones, and (thanks to the atropine) it does not gripe, as does the aloin when given alone.—ED.]

AN IMPROMPTU THROAT-BRUSH, AND A FAT FEE

The other day an old negro "mammy" of the ante-bellum type came into my office looking terribly distressed and holding her hands to her throat. She affected difficult speech, but her "ole man" was along and I was made to understand she had a fishbone in her throat. I had no horse-hair throat-brush, but I took a wad of absorbent cotton about half as large as my fist, and clamped it with a long, slightly curved dressing-forceps. This I thrust down the yawning cavern and gave it a twist or two. She pushed me away, but I insisted on a second effort, which brought back the offending bone, with a little mucus and blood adhering.

"Lord a'massey! You got it, chile—you sure did, now! What's yer gwine ter cha'ge fer dat?" I explained that we doctors never did anything for less than a dollar and if she wanted to pay anything that was the charge.

"Lord bless yer, honey, if I had fifty dollars I'd sho gib it ter you—sho, I would. Good-by, honey. I 'members yer fer it. You sho ought ter git rich."

My fee was her sweet "'members fer it"—and out she went.

I don't know whether the improvised arrangement was superior to the regulation hair-brush, but I cite the occurrence simply as an instance of "nigger cunning and wit"; also, to show that doctors have to be resourceful sometimes and not depend wholly upon ready-made instruments.

F. B. CULLENS.

Ozark, Ala.

DRY STERILIZATION OF INSTRUMENTS

Formaldehyde gas is the best germicide known and when bacteria of any kind are exposed to or bathed in it they perish quickly.

Properly sterilized instruments, dressings, towels, and gowns are an absolute necessity to the surgeon, and, as the old methods of sterilizing by dry or moist heat necessitates cumbersome apparatus with more or less work and waste of time, I have long since discarded my steam-sterilizer for a more simple and effective method of sterilizing.

I have a metal and glass instrument case that is air-tight. In this I keep all instruments, towels, dressings, and gowns. I also keep in the case an open container (large-mouthed bottle will do) holding 2 or 3 ounces of paraformaldehyde.

This is a white powder, much stronger than the commercial (40 percent) formaldehyde, and gives off a dry gas, which does not attack metal as does the vapor of commercial formaldehyde.

If your instrument-case is relatively air-tight, the contents of the case are constantly bathed in the best antiseptic known, and if washed clean after each operation, instru-

ments may be put in your case and be ready for the next operation without further attention.

If the operation is to be some distance from the office, wrap the instruments securely in towels or an instrument-roll that have been kept in your case, and they will be ready for use when needed.

L. D. Clark.

Akron, Ohio.

ECHINACEA AS AN APPLICATION TO WOUNDS. AUTOGENOUS VACCINE

Will it be amiss if at this time I relate the only personal experience I have had in the use of echinacea locally? It was called to my mind by the August editorial, "Clinical Evidence."

Three years ago, being asked to officiate at a dispensary clinic in one of our large cities, during the vacation of its regular clinician, I found a patient, a woman, with an infected vaccination the size of a silver dollar. She explained that four weeks before then she had returned to her home by sea voyage, and it was her misfortune to get on a boat in which was found a case of smallpox. The ship-physician immediately vaccinated the entire group of passengers and crew. His technic as she described it, was very crude and, may I say it, criminal. The same scalpel and the same vaccine-point were used on every patient, and never once were sterilized unless it had been done, once, before he began his task.

The resulting infection in this woman's case certainly showed that there was error somewhere. The dispensary case-record showed that she had been under treatment there ten days, and the course of treatment had consisted in cleansing with some mild antiseptic, followed by tincture of echinacea, and dressing saturated with the same applied at each visit. The record reported no improvement, and naturally I thought that the routine treatment had been followed long enough.

First cleansing the wound in a 1:2000 solution of bichloride of mercury, I then powdered the surface with a dusting powder, mainly aristol, and covered with aseptic gauze. Next day improvement was noted. At this time some unhealthy granulations were removed and the same dressing was repeated. The infection was routed and the wound healed rapidly.

I am not in a position to refute the value of echinacea locally, but that one experience has deterred me from experimenting with it.

In regard to another subject, autogenous vaccines, I wish to tell of a remarkable cure.

A young primipara whom I had confined developed a "beautiful" abscess of the left breast five weeks after delivery. Her home was filthy, all her environment was filthy, and for that reason I cannot take the blame upon myself for that abscess. I tried all the recommended drugs, regular and homeopathic. (I was only a "cub" doctor.) Then I fell back to surgery, and I labored three weeks unsuccessfully before I realized my big mistake. I had not made a culture of the pus. This was soon done and the infection found to be due to streptococcus.

An autogenous vaccine was made; but in the interval I injected a stock vaccine. Three days later the effect observed was very good and I injected a dose of the autogenous vaccine. My patient never returned for further treatment and, so, in a week, I looked her up and found a perfect cure, and the evidence of my surgery nearly eliminated.

William Rae Young.

Shelbyville, Mich.

SMALL THINGS FROM A DOCTOR'S PRACTICE

According to my own experience, oil of cassia (not oil of cinnamon) ranks with bichloride of mercury as a germicide, and in many cases the cassia oil should have the preference. With this oil I have cured, in some instances, barber's itch in less than thirty-six hours.

I can say the same also with regard to the poisonous effects of the poison-ivy. This vine often is mistaken for the Virginia-creeper, their leaves looking somewhat alike, but they may easily be distinguished, for the rhus has but three leaflets to the stock, while the Virginia-creeper has five.

When a person of scrofulous diathesis has his face thickly beaded with acne, or if anyone is troubled with boils or furuncles he may be cured with a course of sulphate of magnesium. Dissolve 10 drams of the magnesium sulphate in a quart of water, and of this solution let the patient take one tablespoonful each morning before breakfast. By the time seven or eight doses are taken, the system will be so saturated that it is difficult for some to continue its use. However perseverance will bring the desired results. The entire quart of solution should be consumed.

Dandruff can be effectually cured. Dissolve 1 ounce of sulphite of sodium in 28 ounces of water, then wet the scalp with this

solution every night long enough before retiring for the hair to dry. In the morning brush the dry salt out of the hair. Ladies need not wet all the hair but only the scalp. Use every night for two weeks, then twice a week for a month, when the dandruff will be gone, as a rule. J. G. TEMPLETON.

New Wilmington, Penn.

A VOTE FOR BLANCHARD, AND A GOOD WORD FOR COPPER ARSENITE

I notice in your August issue the request that we in the field are to pick the winners of the contest for the best article on summer-time ailments. I herewith comply.

Give the first prize to Blanchard, of Youngstown, Ohio. It is a pleasure to hear from a man who evidently knows what he is talking about and who has not culled all the archaic literature on the subject before writing his thesis.

His treatment and mine correspond almost exactly—so, of course, he *must* be right. One thing, he failed to do, however, was, to state the dosage of the copper arsenite as prescribed by him.

I find that other men apply this drug cautiously, and have little faith in it, anyway. Under these conditions, the results they get are practically *nil*; and that is to be expected.

I myself first used the copper arsenite for typhoid fever about four or five years ago, being guided by what scanty information I could obtain from the textbooks; but my results were not brilliant, to say the least. Later I began to use my head a little and started pushing the drug carefully until eventually I was giving three or four times the dose recommended by the various "authorities" and found that I was getting results that, in some cases, were little short of marvelous.

For typhoid fever, after a brisk purge with calomel followed by castor oil or magnesium sulphate, I begin with 1-50 grain copper arsenite, taken with plenty of water, and give it every three hours for a day and a night. Then, if the character of the movements is satisfactory and the temperature has not abated to 101 degrees in the evening, I increase the dose to 1-50 grain every two hours, and keep this up until either the fever drops to safe limits or the patient begins to show signs of poisoning. This latter contingency has never arisen with me so far—and I have given many thousand doses.

For a child of one year, I begin with 1-250 grain of copper arsenite every three hours, gradually increasing this to 1-100 grain every two hours, if necessary. Give lots of water—this for "summer-complaint," cholera infantum and any condition wherein we have to contend with the results of improper and abundant over-feeding, with the consequent intestinal indigestion and toxemias.

Dr. Blanchard's idea of restricting food is the keynote to the successful treatment of this class of disorders and should not be lost sight of if you expect to get these little folks well.

Strange as it may seem, it is almost impossible to starve these little ones to death, while it is extremely easy to kill them by injudicious feeding. To illustrate:

One day I was called to see a child of two years who apparently was in the throes of death. Its temperature was subnormal; pulseless; eyes, deep, sunken and staring; it was very restless, and intensely thirsty; tongue was dry and brown; it was moaning incessantly. The parents expected the child to die, and so did I, hardly thinking it could live through the night.

Nevertheless, I administered calomel, 1 grain in divided doses; also I cleaned out the colon with a high injection of normal salt solution, leaving in about a pint to be absorbed and to dilute the circulating toxins. I also gave orders to give castor oil, 2 teaspoonfuls, in the morning, if the child should be alive. Then, in addition, I left some copper-arsenite granules, to be given with plenty of water after the calomel had all been taken.

I told the mother that if she wanted to kill the child, she should keep right on giving a drink of milk every ten or fifteen minutes as she had been doing; if, on the other hand, she wanted its life saved, she must not give it *anything* but water and the medicine until I gave permission.

The child was somewhat improved the next morning, but still on the ragged edge of nowhere. The irrigation was repeated twice daily, each time leaving in a pint to dilute the blood toxins and to quench thirst. On the fifth day, I allowed a little oatmeal-gruel, made pretty thin, and, later, some albumen-water; then gradually worked I back to the full diet.

This was three years ago and the child is now (and was at the end of the summer) the picture of health. I mention this experience to show how long a child *can* be starved and, yet, get well. *Five days without a particle of food* in any form, except water, is almost too long for safety. Three days is now about my limit.

Again I say, give it to Blanchard, he has the right idea.

ALEXANDER BARCLAY.

Cloquet, Minn.

[Dr. Blanchard seems to be a favorite and those who have read his articles will understand why. The prizes will be announced next month. In the meantime, we hope that everyone having original or practically helpful ideas regarding *asthma* will send them in. Thus far we have received very few articles on that subject.

We are under obligation to Dr. Barclay for giving us the additional imformation and experience regarding copper arsenite. It is a valuable remedy, and was a great favorite with our old friend, Dr. Coleman, of Texas, in all the summer ailments of children. No doubt many failures with it were due to insufficient dosage. Copper is a powerful bactericidal agent, worthy of being ranked with the sulphocarbolates; indeed, Dr. Cummings, of New Jersey, gave us an exceedingly valuable article on copper sulphocarbolate some months ago, showing that it was effective in cholera, typhoid fever and other diseases of alimentary origin. The copper salts should be used more, both singly and in association with the sulphocarbolates and other intestinal antiseptics.

But as to the prizes—what say other readers of CLINICAL MEDICINE?—ED.]

A CORRECTION

A Philadelphia subscriber, Dr. A Sidney Reynolds, calls our attention to the fact that in the editorial "Semper Paratus," which appeared in the August number of CLINICAL MEDICINE, pages 633 to 634, nitirite of amyl apparently is made identical with glonoin. Though we hardly think any reader of CLINICAL MEDICINE will misinterpret that editorial, of course we want it understood that chemically the two remedies are entirely distinct; however, we all know that as regards physiologic action, they are almost identical, that of the nitrite of glyceryl (glonoin) being somewhat less evanescent.

MAGNESIUM-SULPHATE DRESSINGS FOR ERYSIPELAS

Our old friend and colleague Dr. W. T. Thackeray writes us from Fowlerton, Texas, that he doesn't like the local application which we advised for the treatment of erysipelas. In other words, he objects to iodine or any other escharotic being used.

Dr Thackeray claims that erysipelas yields readily (usually within twenty-four to thirty-six hours) to the application of compresses wet with a saturated solution of magnesium sulphate, together with the internal administration of magnesium-citrate solution in refrigerant doses. "I can assure you," he says, "that I look for results from this dressing with as much certainty as I should for an action of the bowels from a big dose of croton oil."

Although Thackeray doesn't say so, I am sure that he also believes in calcium sulphide, pilocarpine, and other indicated remedies, and I think he would advise the bacterin treatment in severe cases.

THE EXTERMINATION OF COCKROACHES

Locusts, June-bugs, and spiders may be nutritious, they may even be considered delicacies by superrefined gourmands; still, the ordinary mortal hardly would relish these insects as an article of diet. The cockroach, however, is detested by all halfway civilized people, whether as home-companion or as a casual constituent of an appetizing dish, and, hence, everybody wants to get rid of these house-pests; but efforts in this direction have been rather spasmodic and half-hearted. But now that investigators begin to accuse cockroaches of being, in all probability, carriers of disease, even of the cancer-germ, certainly more strenuous efforts should be put forward to rid our homes and places of business of these disgusting and devastating creatures.

Really, it is strange to observe with what equanimity and fatalism the people of this country view this voracious agile insect overrun their premises—see the partitions and ceilings swarming with these creatures as they fill the room with the buzzing from their vibrating wings, see them chase over their table and victuals while the family are eating their meals, find them emerging with lightning speed by the hundreds from every receptacle when being unlidded, watch them gnaw up and destroy their linens in the chests, find their dead bodies in the soup, and all that—and one cannot fathom the psychology of these folk, considering our present stage of civilization and general refinement.

In regard to this house-pest, our American people act as though there were no defense against them and must be endured; so, they have become inured to their repugnant pres-

ence—the more so, since they seemed quite innocuous and do not annoy us as do the bloodsucking marauders.

And, yet, it is so easy to get rid of cockroaches, if one only goes at it with a will. And all that is necessary is, to keep the corners clean, ransack all receptacles and shelvings at frequent intervals, keep all foodstuffs under cover and leave no food remnants scattered about (especially over night), and—and this is the only direct exterminator required—use borax, and use it freely. That is all, except to putty up and seal up tight all communications with rooms in the same building occupied by other people. If this is faithfully kept up, no casual intruders from the bakery or grocery will have a chance to multiply and plague you.

All kinds of formulas for cockroach-exterminators fill books and magazines, representing every possible and impossible combination of drugs and things; men have grown rich selling compounds of secret compositions; other men have gathered in the shekels by ridding premises of cockroaches, charging fancy rates for their services. Many of the recipes passing from generation to generation, from one druggist's journal to another, are absolutely worthless, others are ridiculous conglomerations, while the substratum of practically all having any worth is borax.

The writer of these lines himself for nigh unto a lifetime was obsessed by the superstition of the complex formula for cockroach-destroyers and in an editorial capacity has faithfully helped to disseminate them among the drug fraternity. He awoke to the truth, however, a few years ago, when, in the house of an acquaintance he met and saw operated one of those "cockroach-contractors"—one who had been in this business "since the fire," and whose magic powder was the fore-runner (so far as the writer is advised) of the various exterminators upon the market.

A modicum of the compound was obtained, and the gentleman was adroitly interrogated in certain directions; and this, together with certain other knowledge, established the fact that the powder was nothing but borax, to which a percentage (*ad libitum*—but from 8 to 20 percent) of a farinaceous substance—fine cornmeal—is added to prevent the borax powder from lumping and to make it more easily distributed with the bellows. Persian insect-powder sometimes is added, but any great additional benefit from it may be doubted. (Most people ignore the fact that pyrethrum powder quickly loses its virtue upon exposure.)

Now, here is something that may interest many of us. The cockroach, like the fly, is a very cleanly beast and continually wipes its body with its legs and then draws them, as also its centennæ, through its mandibles, in order to rid them of anything adhering to them. (This is a physical necessity to keep it in fit shape.) So, when a cockroach has run through a bank of borax, or the powder has been blown over it, it embraces the first opportunity to clean itself. Watch him—it's interesting! (Catch 'em when they are sickened by your "exterminator" and are less speedful, and put them into a large bottle covered with gauze, supplying them with damp bread or fruit. You will learn other interesting things.)

By this toilet-procedure the cockroaches get all the borax "they want"—and your tempting sugar and flour and cacao and what not is wasted; for they do not eat the stuff in the regulation way. Nor do you need to endanger your household by the addition of paris-green or other poisonous chemicals; the harmless borax is "sure death" to them; only they must get it on their legs, somehow.

The trouble with our people is, that they will blow or scatter about a "nickel's worth" of some powder and then brag they "have done everything in the world," but do not even clean the corners, or kill all possible, or destroy the "eggs" cast off by the females. By the way, altogether too little attention is paid to these "eggs," for each one of those brown capsules contains from one to two dozen of young ones, which upon release, are "ready for business." Hot water destroys them; but neither the powders nor benzin affects the shells. It may be added that as the larvæ mature they give off a glutinous fluid that softens and breaks the suture of the capsule.

To free the premises from the cockroach pest, all that is necessary is, to strew in "ropes" the borax mixture along the top and bottom of the washboards, on window and door-frames, along and behind shelves, and wherever they are wont to hide. Then, with a powerful bellows, blow the powder into all chinks and behind boardings from which they emerge, and where they hide during the daytime. Leave the powder there, no matter how "it looks." If by exposure it has become lumped, it must be replaced by a fresh batch. (Persian insect-powder rapidly looses its efficiency by exposure to air; not so borax.) This is all the "bug specialists" do. When the creatures have ingested the borax, they grow sick and will come out of hiding—much

less agile—and then is the time to smash them. All possible must immediately be swept upon the dustpan and incinerated.

This treatment, if faithfully carried out, positively will clean out isolated buildings or flats—but only vigilance and cleanliness will keep them clean. It must be remembered, though, that at a given time there are present a number of generations hidden in their egg-capsules, and that these will hatch at successive periods; while any female escaping poisoning, whether of the original or a younger brood, will quickly multiply into the thousands. Hence, the powder must be kept in place for at least a month after the last single individual was seen on the premises. Chicago is badly infested by the blattids and other domestic insects pests (it is an indictment of the inhabitants), but the writer has successfully combatted them in more than half a dozen premises.

We have, here, the large blackish cockroach (also called black-beetle), and the smaller light-brownish (imported) variety known to many as the croton- or water-bug. Borax is deadly to both. So it is to the bristletail (silvertail, silverfish). One other of these nasty house-pests, and a destructive one—the "house-centipede"—can not be exterminated with borax; for these, copper-arsenic compounds are demanded. In passing, the writer should like to learn the proper term for the latter creature; which is the most repellant of the whole mischievous brood, and which also is said to be poisonous.

Benzin (gasolin, etc.,) is very efficient for killing any one of these pests, as well as bedbugs and fleas (it does not kill the eggs), only it is dangerous in careless hands. Sometimes it only numbs, though, for a time, so that they must be smashed when they come out in their agony, or be swept up, if seemingly dead. The fluid is useful to reach them in cracks, crevices, and behind boards. A hard-rubber, long-nozzle syringe is best for applying the benzin; or a quill may be fitted into a cork. (A swab or brush is wasteful.)

It may interest some to know that the word cockroach is a corruption of the Spanish *cucaracha*, the "roach" being a harking to the previously known word, but which does not refer to any like creature. A similar instance is the popular interpretation of asparagus as "sparrow-grass." Hence, it is incorrect (though now sanctioned by the dictionaries) to refer to cockroaches, as Americans do, except as colloquial, and understood, abbreviation. In the West Indies, there are cucarachas two inches long, that are bred in the woods, and fly about like grasshoppers. Confined in pasteboard boxes, these "critters" make a noise like gnawing mice.

ADOLF G. VOGELER.

Chicago, Ill.

DR. HOLLEN ON PRACTICE IN CUBA

If you are a good operator, write to Dr. Laine, Havana, corner of the Prado and Virtudes St., and get information. The doctor is looking for a man to join forces with him—one who is a good all-around surgeon and has a little capital. His plan is, to establish on a small scale a hospital, for the accommodation of the "American colony," as well as for others who may care to come in in case of sickness.

If you care to specialize in nose and throat work, write to Alfred E. Holmes, of the Norway legislation, Apartado 977, Havana. This gentleman assured me that he could place at least one doctor very favorably.

"There is no one here at present," were his words, "to whom we feel like going; and we "foreigners" do not care to patronize a Cuban or Spanish practitioner. Consequently, many of us are forced to go to the States for treatment—at great expense and loss of time."

"And you are quite sure there would be enough to do for the doctor who comes here?" I inquired.

"Yes—absolutely! There is an income here from the start, for the right man. Better yet, if he can fit glasses."

And there are a few other openings, but I would advise everybody interested to go down first to investigate. Take plenty of time and look around—from one end of the island to the other. Various objections to living and practicing in Cuba will present themselves, and each one must decide for himself whether they are worth negotiating for what there is is in it.

As stated in my article in the June number, no reciprocity obtains; nevertheless, a good man, one who is determined to stay in Cuba, will not find himself barred out. The present (new) administration is very favorable to American settlers of every class.

And don't go down "broke," expecting to find occupation of some sort to bridge you over. There are very few positions open which a professional man can, or will, fill—especially if he can not speak the language of the island, which, of course, is Spanish.

For any other information, write the doctors on the ground (see directories), not forgetting to enclose a stamp for reply.

HENRY B. HOLLEN.

Chicago, Ill.

TOO MUCH LEGISLATION

The Bulletin of Pharmacy prints the following letter, which was sent to the Pennsylvania Pharmaceutical Association, prior to its annual meeting, some weeks ago:

Having observed in the public newspapers that a member of the legislature intended offering a bill to prevent the sale of bichloride of mercury tablets, inasmuch as several deaths have occurred from the carelessness of individuals, I would suggest that your honorable body, by resolution or otherwise, request the said member of the legislature to add that "owing to the fact that great numbers of our citizens have departed this life by the sure and easy method of inhaling illuminating gas, on and after the passage of this act it shall be unlawful for any one to use illuminating gas without first securing a prescription from a duly registered physician so that the ignorant, careless and vicious may be protected." Should your body see fit also to add guns, knives, and razors to the act I will offer no objection.

We would suggest that green cucumbers and hot biscuit be added to this list, and that it be further enacted that these agents shall be obtainable only from a duly registered pharmacist, dispensing of any of the aforesaid by the physician himself being rigidly forbidden. The latter criminal (the dispensing doctor) should under no circumstances be permitted to use potent drugs or eat warm food—in fact, what right has he to eat anything? (See recent issues of *The Journal of the N. A. R. D.*)

WORMS AND TYPHOID FEVER

Worms is a rather prosaic subject, one that we very seldom see discussed in medical journals, and yet, nevertheless, one which the general practitioners meet with about three hundred and sixty-five days in the year. When I was a medical student in one of our leading medical colleges, I recall, how our lecturers, apparently by unanimous consent, almost wholly ignored "worms." I further find a scarcity of information on this subject in our textbooks, especially as to the clinical manisfestations.

It very frequently happens that the young doctor's first call is in a case of worms. He is usually somewhat puzzled by the symptoms, and after making a tentative diagnosis of gastritis, pneumonia or chorea, he is very much surprised to see all symptoms clear up in a remarkably short period after the administration of santonin and calomel.

The frequency with which worms complicate pneumonia and typhoid fever, both in children and adults, is not duly appreciated by the average doctor. It is a concomitant condition that is often overlooked or that does not manifest itself until the patient is in a more or less exhausted condition. A great many physicians apparently act on the presumption that worms do not constitute a pathologic condition, and, hence, require no special attention. Occasionally a patient is tided over a severe case of typhoid fever or pneumonia, only to succumb later to the ravages of the ascaris lumbricoides.

The following cases are of interest:

Case 1. In the winter of 1910 to 11 I was called to see Mr. J. He was suffering from pain in the left side, had a temperature of 103°F., was expectorating a tenacious rusty-colored sputum. My diagnosis of pneumonia was confirmed by physical examination.

From the time treatment was initiated the case ran a rather mild course until the ninth day, when the temperature fell to normal and the signs of resolution were noted in the lower lobe of the left lung. The tongue was coated, and there was complete anorexia. About this time considerable distension of the abdomen was present and the patient began to vomit. Bowel action ceased and could not be induced by enemata.

At this juncture the nurse informed me that the patient had vomited a worm during my absence; so, I immediately began to administer santonin and calomel. The tympanitic condition of the bowels increased and in a few hours patient became delirious, passing away before arrangements could be made for an operation. In all probability occlusion of the bowels occurred from the presence of worms, although I was not fortunate enough to be granted an autopsy.

Case 2. Boy, age 13 years. On my first visit I found the patient with a temperature of 105°F., headache, the stomach and abdomen tender on pressure, and slightly tympanitic. On pressure passage of flatus from one portion of the intestine to another could be heard. The patient was very restless and displayed mental wandering. On palpation of the abdomen, something knotty, irregular, and more or less movable could be felt. A diagnosis of typhoid fever and worms was made.

After an initial dose of calomel and santonin, there occurred four or five stools a day, of a color and consistency resembling pea-soup, and of extremely foul odor. Several worms were passed during the first twenty-four hours, and during this time the temperature ran still higher and the patient became more delirious.

The sulphocarbolates were now given every four hours, and by means of an ice-bag, cold-packs, and a few doses of phenacetin, the temperature was reduced to 102°F., while the delirium ceased.

My diagnosis of typhoid fever later was confirmed by the appearance of typical rose-spots. The patient was regularly given castor oil and turpentine oil each day, and discharged worms in various numbers almost daily until the end of two weeks, when his temperature reached normal.

This case looked very bad in the beginning, but the patient responded nicely to treatment. Oil and turpentine were given daily, with a view to completing the work of the santonin and calomel, also as a valuable adjunct in the treatment of typhoid fever.

If a physician desires to be successful in the treatment of typhoid fever, he must assiduously guard against complications, as it is usually a complication or relapse that kills.

H. W. Smeltzer.

Greendale, Va.

TYPHOID-FEVER REPORTS

I was called to see C. H., a farmer 35 years of age and of robust physique. I found symptoms of autointoxication, but the patient said, "Doctor, I feel just as if I were taking typhoid fever." A temperature of 99°F., a coated tongue, and a feeling of lassitude were the only symptoms observed. It being May and the family living almost at the foot of the mountain, I could hardly suspect typhoid fever; still I told the patient I would put him on appropriate treatment, and had the Widal test made to be sure of my diagnosis.

I prescribed as follows: Calomel, gr. 1-2; podophyllin, gr. 1-2; sodium bicarbonate, grs. 5; this quantity to be taken every half hour for six doses. Then, three hours after the last powder, a dose of saline laxative. Also a heaping teaspoonful of sodoxylin four times a day and the 5-grain intestinal antiseptic tablets (three sulphocarbolates) in a half a glass of water every hour.

I saw the patient again in two days and his condition was about the same, the temperature never having been any higher. The same treatment was continued, and every precaution as to sanitation about the premises was taken. Meantime the laboratory report was received, which gave the Widal test as positive. I saw the patient again two days later, when there was marked improvement. Just seven days from the first day the patient went to bed, he started on solid food, and uninterrupted recovery followed. The state bacteriologist made the Widal test, and there can be no mistake.

Within a week following the first case, I had another patient giving a positive Widal reaction. This patient, only 12 years of age, also recovered in about the same length of time, but the temperature went to 103 degrees at first. Then within another week a third patient giving a positive Widal came under my care. These individuals were in widely separated sections of the country, and no other cases were reported in this section during this time.

This last one seemed to be a real old-time case of typhoid fever, with a temperature of 104 degrees, a coated tongue, headache, aching muscles, tympanites, constipation (instead of diarrhea), and a typical history previous to this. A trained nurse was placed in charge. My treatment included a wide variety of drugs as suggested by the different symptoms during the course of the disease, and included: calomel, podophyllin, the sulphocarbolates, strychnine, and digitalin; the drugs being used to control conditions as presenting themselves. The active application of remedies, even for a short time, kept complications in abeyance. This third case responded to our care in short order—two weeks of fever—as I now expect all my typhoid fever patients to do.

Sometimes I use cold baths, but I prefer tepid sponging. I lost one typhoid case to another doctor, once, because I used snow rubbing, personally, to control hyperpyrexia. I had to do it while I was waiting for my medication to act. The people, however, did not appreciate my efforts.

In reporting my last case to the county health officer, he called me over the phone to learn whether I had not made a mistake in the duration of the sickness. He could not believe that it was true typhoid fever, if recovery was so prompt.

Another amusing incident was being criticized by two individuals in the neighborhood

for not being being able to diagnose typhoid fever without a blood-test! As I am editing a health column in the county paper, I shall explain this at length, as others may not understand it either.

F. E. McCann.

Salesville, Mont.

THE SECRET OF THE BIG TREES

In the days of the Prophet Elijah, sore famine afflicted the land of Palestine. No rain fell, the brooks ran dry, and dire distress prevailed. "Go through the land," said King Ahab to the Prophet Obadiah, "unto all the fountains of water and unto all the brooks; peradventure we may find grass and save the horses and mules alive, that we lose not all the beasts." When Obadiah went forth in search of forage, he fell in with his chief, Elijah, and brought him to Ahab, who greeted him as the troubler of Israel. Then Elijah prayed for rain, according to the Bible story, and the famine was stayed.

From this famine in Palestine, some 870 years before Christ, to the forests of the Sierra Nevadas, in the twentieth century, is a far cry; but the connecting link between the past and the present, between the ancient East and the modern West is found the big trees of California, the huge species known as sequoia washingtoniana.

In a publication entitled "The Secret of the Big Trees," by Ellsworth Huntington, just placed on sale by the Superintendent of Documents, Washington, D. C., it is shown that the growth-rings in the big trees of California indicate that in general the same sequence of climatic changes took place in California and Asia Minor. Curves indicating climatic conditions in California and Asia Minor show a remarkable resemblance between the two regions. The curves begin with the epoch of the Trojan War, about 1200 B. C. There both curves dip very low, indicating an epoch of sudden and severe desiccation. That particular period, historians tell us, was one of the most chaotic in all history.

The famine in the days of Elijah appears in both curves. Apparently at that time the climate did not become extremely dry, nothing like so bad as it had been a few hundred years earlier, during the amount of rainfall as compared with the uncommonly good conditions of the preceding century. About seven hundred years before Christ both curves stand high in the day when the Greeks were laying the foundation of their future greatness and the empires of Mesopotamia were at their height. Then comes a pronounced falling off, with a recovery three or four hundred years before Christ, another decline culminating about 200 B. C., and a recovery reaching a high point about 50 B. C.

The time of Christ, the great era of universal peace under the sway of Rome, was apparently an epoch of favorable climate, a time of abundant rain and consequent good crops in all the countries around the Mediterranean Sea and eastward in Asia, as well as in California. Next comes a long period of decline, culminating six or seven centuries after the time of Christ. No period in all history, save that which centers about 1200 B. C., was more chaotic; and that early period also appears to have been a time of greatly diminished rainfall.

This publication, which may be purchased from the Superintendent of Documents, Government Printing Office, for five cents, gives a detailed account of the reasons and the work that led to the conclusions given above. It also contains 13 illustrations, showing the big trees in the Yosemite, Sequoia, and the General Grant National Parks.

ANOTHER SCHEME TO GET THE DOCTOR'S MONEY

From subscribers to Clinical Medicine in Illinois and Iowa we are receiving copies of a letter sent out by the secretary of a coal firm that has general offices in Chicago and in mines at different places in the state of Illinois. This letter reads as follows:

> I have in my possession a physician's prescription for rheumatism, which has eliminated the pain every time I have used it. I am subject to acute attacks about once or twice a year, and, as above stated, this remedy surely does the work. I fully believe that, should you prescribe it for any of your patients, good results would be obtained. My own family physician prescribes this remedy with success, and thereby endorses it. If you will send me one dollar in enclosed envelope, I shall take pleasure in mailing you a copy of this prescription, which you should have without fail.

The letter is hardly one deserving special comment, yet, we must say that we agree with one subscriber who says: "It is getting pretty 'raw' when an individual will sell a physicians prescription after he has derived benefit from it, in order to get a little personal graft out of it."

What makes this individual's nerve appear all the more colossal is the fact that he is not going to the laymen with his "wonderful prescription for rheumatism." He deliberately goes out to the physician, whom he is

anxious to instruct in the practice of his art. Is it any wonder that many doctors who have received this letter look upon it as an insult?

APPENDICITIS

Said the would-be surgeon wise, as he rolled his solemn eyes,
"Cut it out."
Long ago it was an ache,
Inflammation, or a cake,
But now it is no fake.
He can see through a knife, and he warns you on your life,
"Cut it out; cut it out."
The saw-bones fresh from school mutters, like a foolish fool,
"Cut it out."
If a cramp your rectus gripes,
Or a little wind in stripes,
Doubles up your sewer-pipes,
He repeats in accents wise, and no matter if he lies,
"Cut it out; cut it out."
If a little dinkey pain strikes your abdomen again,
Don't be rash.
Call a doctor you can trust,
One that's free from money-lust;
And if he says, "You must,"
Shut your mouth and grin and go where the pretty nurses grow,
Let an expert cut it out.

A. D. HARD, M. D.

Marshall, Minn.

HELP TO MAKE SMOOTH THE ROAD TO MOTHERHOOD

It is probably natural for a conscientious physician to feel that he knows altogether too little about the art of the great, though imperfect, science, by which he professes to relieve the sufferings of humanity, and incidentally to separate the laity from a small portion of their lucre. Being no exception to this rule, I resolved early in my practice, to consider all suggestions, no matter what the source, whether from the learned professor or the empirical negro "granny," and to "prove all things and to hold fast to that which was good."

I will say that the source from which I probably have gotten some of the most important information outside of my own profession, has been the veterinarian. I have been fortunate in having a close personal acquaintance with three first-class veterinarians, one of whom has an international reputatuon, and than whom there is no better. I speak of Dr. W. H. Dalrymple, M. R. C. V. S., professor of veterinary science at the Louisiana State University. I never meet any of these gentlemen without adding something to my store of useful practical information.

We gain so much knowledge in the laboratory, through experimenting on the lower animals, that it seems strange that so little attention is paid to comparative therapeutics. There is not a question of a doubt that the *human* physician as well as the *humane* veterinarian would make his science much more nearly perfect by possessing himself of diplomas from both kinds of schools.

It strikes me that it would be well to establish a chair of veterinary science in every one of our medical colleges, and require every applicant for graduation to have taken the course or to show a certificate that he has taken the course at his state university. The following recital alone will be sufficient proof of the wisdom of such a ruling and this little information, which I believe will, when called to the attention of the medical profession, be of inestimable value to prospective mothers in making smoother the rugged path to maternity, was gotten from a—swine-man. Come to think of it, valuable lessons have been gleaned from the swine-men even as far back as the "prodigal son."

This man of whom I speak was a practical man, and, so, when he started to raise swine he bought Coburn's book on "Swine Raising." In this book he read that, if sows were fed on *Indian corn* during gestation, especially during the later months, the pigs were delivered with the greatest difficulty. Usually the pigs would come dead, and often the sow would die also, not being able to deliver.

The reason for this is quite apparent. In preparing hogs for market they are always "finished off" with a corn ration, to harden the flesh"; this making so much difference in the texture of the flesh that the experts at the stock-pens can tell at a glance which hogs are corn-fed, and which are not.

Then the question presented itself, "If that is true for the lower animals, why not also in the case of humans?"

A friend of mine, whose wife was then just starting on her fifth pregnancy, hearing the discussion, decided to make the experiment. His wife was a great lover of the cornmeal products, and it was recalled that during the four preceding pregnancies she had been extremely nauseated all the way through, and had been an unusually long time in labor each time, and there had been considerable injury to the babies' heads from the compression, while one of them died. I was not with her in the first four confinements, but that is the history given me. Now, however, during this, her fifth pregnancy the mother was not nauseated at all, was in labor not to exceed three hours,

gave birth to the largest child she had ever had, and, yet, experienced less suffering than ever, and the child's head was in good shape. Her muscles and tissues, I found, were soft, and yielded readily to the oncoming head.

Dr. Todd of Santa Lucrezia, Mexico, and his beautiful wife

Since that time I have experimented with quite a number of women, and the result was the same in each case. I fear no laceration of the perineum in cases where the cornmeal diet has been eliminated. On the other hand, wherever I have not been notified ahead, and the woman has eaten freely of cornmeal products, I expect, and find, great difficulty in preventing laceration. In one muscular young woman who ate a great deal of cornmeal, it was absolutely impossible to prevent an almost complete rupture of the perineum, which I had to operate upon at once. The muscles were so hard and strong that they would not yield, and the *vis a tergo* so great that rupture was the inevitable result.

I now always give instructions to every expectant mother in regard to this matter and thereby eliminate a vast amount of suffering on her part and fight more than half my own battle.

Furthermore, I always advise young men who are expecting to study medicine by all means to take the agricultural course after completing their college course at our state university. They can get enough Latin and Greek for medical nomenclature and more chemistry than in other courses, and above all a good course in veterinary science. I have regretted only once, and that is ever since graduation, that I was not so advised while I was there.

E. B. Young.

Baker, La.

FROM REBELLION-CURSED MEXICO

I left Tulane University (New Orleans) in the spring of 1910 and went to Central America, where I stayed awhile, being more or less mixed up in five revolutions in but little more than a year. The sugar-plantation at Santa Lucrecia, where I now am and have been for two years, employs three thousand men and women. It is one of the largest in Mexico, turning out a hundred tons a day. I am the only doctor within a hundred miles, and during the rainy season I am pretty busy at times, when I am attending more than three hundred patients a day for weeks at a time. But in the dry season, when I get the

Dr. Todd's guard, used to enforce quarantine regulations

Prepared to rebel invaders! There is smallpox on the other side of this Mexican river

place cleaned up, the number runs down to from thirty to fifty daily.

I have two hospitals, one holding thirty patients and the other sixty. My operating-room is well fitted up with all the necessary equipment for surgery, as is also my microscopic laboratory.

The easiest work I have is that in the line of obstetrics. There is little difficulty about coming into the world hereabouts. I am entimologist for the plantation, too, and am having some success in propagating a fungus to kill the bug that destroys the cane. My duties are in part those of the army-surgeon also, because these native fellows like best of all to scrap; and with their machetes and cane-knives they certainly slice one another up terribly.

I get all kinds of practice here. For instance, yesterday, in a fight, one fellow got his head cut open and another his jaw cut nearly off. Last week a train turned over and there are five in the hospital as a result—one leg, two feet, one hip, and one collar-bone broken, two shoulders out of joint, and one arm off.

The soldiers shown in one of the pictures enclosed are used to enforce my quarantine regulations. (Other photographs represent scenes in the streets of Mexico City.) A virulent type of smallpox has existed just across the river from us for a good while. I did hope to be able to prevent its introduction upon the plantation, but without success, and now we have it the worst sort.

Our news here is naturally chiefly war-news, and it keeps one busy to keep up on that. With all of the interest that this beautiful wilderness holds for me (and I have lived in tropical countries most of my life), I am getting tired of the unsettled political affairs of this country and shall leave here for the States this fall.

E. B. Todd.

Santa Lucrezia, Vara.

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[Doctor Todd informs us that he is chief of the cleanup gang and has to issue permits to those who are laid off from work because of illness or other disablement. He reads Clinical Medicine and likes it.—Ed.]

MEXICAN PEOPLE AND MEXICAN PROBLEMS

(continued.)

Bismarck, the great German chancellor, after the Franco-German war, thought to crush the French government by levying upon them the enormous indemnification of 5,000,000,000 francs. He did not count upon the patriotism of the French people, who cheerfully offered their savings, big or little. on the altar of La Patrie. And such acts give a new and a holier meaning to the word which designates the country of our fathers and of our birth. The enormous sum was paid, through French patriotism, in such a an incredibly short time that the world sat up and took notice.

The Mexicans consider themselves of Latin blood and of the same race as the French, and it was thought that what the French did do the Mexican people would do

See the house marked with a star? This is where Dr. Todd (see preceding page) lives. Plantation office in the foreground

also. And so the Mexican government resolved to float a loan of 100,000,000 pesos among its own people.

In the meantime, the governor of the state of Miohoacan, Dr. Silva (professionally a very popular man), full of enthusiasm for the idea, resolved to make a call also on the patriotism of the people of his state, and he asked for voluntary contributions for funds to arm and equip one thousand men to check the depredations of the many bands of outlaws within the border of the state. In the country where I reside, two men, I believe, contributed 15 pesos each, one man gave two pesos, and two men gave each a horse. Total, 32 psesos (about sixteen dollars) and two horses. So, the state government had to levy a military tax. It was very small and reasonable, but now the people are studying up means to get the rascal Silva, the erstwhile idol, out of that chair—for as a governor he clearly is no good.

Judging from this instance, I am afraid that the Mexican government will have to look for its $50,000,000 elsewhere, as Mexican patriotism does not seem of the same Latin brand that the French article is made of.

The brand of patriotism as manufactured in Mexico has other peculiar manifestations, not easily understood by such prosaic people as represent the Anglo-Saxon race. They will destroy their own native towns and cities, and rebels always count on the patriotism of the native-born sons of the town they wish to take. So that you may understand what I mean, I will mention one case out of many, the destruction of Puruandiro of my state.

Puruandiro was taken by perhaps fifty rebels, it is said; but that is not so. The rebels put themselves in communication with the lower class of citizens of the city and on the night agreed upon, they attacked the town, looting and burning the stores and private dwellings, raping women and young girls, some of them only eight years old or less, and murdering those against whom they held grudges.

Next morning Puruandiro, a city of about 7000 people, was a heap of smoking ruins, full of dead and dying, and above the crackling flames, the moaning of the wounded, and the lamenting of women and children rose the unearthly yelling of the drunken and looting demons, who yet in open daylight, not heeding the pleading of women and children, satiated their inhuman, bestial appetites on their victims, in public places, beside the dead bodies of father or mother of the victims, not respecting even death in their orgies.

So, the reader may understand, we are not so much afraid of the rebels from without, who easily could be beaten off, as we are afraid of our own people, those that are within our gates, and often in our own households. They that eat our bread, they that have received many kindnesses from us, they are our worst enemies; of them we are afraid.

The city of Uruapan was looted by its own people, and it was not government troops that restored order, but the rebels who were called in and whipped the rabble.

Right now we are isolated, with the rebel lines not very far away, and it is a long time

since we have had communication with the outside world. When Huerta became president everybody believed that the end of all strife was in sight. But Zapata, Orozco, and others stayed in the field. However, many rebel bands came in and acknowledged Huerta's government, manifesting their willingness to take the field against their former companions. It was generally believed that the few bands that refused to come in would soon be crushed by sheer superiority of numbers. Then the unexpected happened.

Gertrudis Sanchez, who had received arms and ammunition from the new government, counted on Salgado, one of the most heartless scoundrels that ever looted a store or sacked a town. As, during Madero's régime, he had been the object of persecution, of the Figueroas, Sanchez, and Vicaries, it was known that he harbored ill feeling against those men. So, the government counting on this, fitted him out and put him in the field against the new movement.

Now Salgado, true to his instinct, is looting towns and committing all kinds of depredations on his own account, so that we have in our district, Michoacan and Guerrero, at least 4000 men against the government. They lately took the town of Tacambaro and spread all over between here and Patzcuaro. An armistice of six days gives us a short respite, but within two days more, on the last of this month, that will be up.

Just now they are putting up posters advising the public of the creation of a new office in the Ministry of Public Works, called the Department of Labor, with the attributes of an employment bureau. This department was created in the hope of putting an end to the revolution, by giving work to the unemployed, which proves that the government officials do not know the real condition of the country. Anybody who desires work can have more than he can attend to, and at better wages than he ever enjoyed in his life before. The wage here formerly was 25 cents a day, and now it is $1.00. Coconut, cacao and banana groves are going to ruin for lack of men willing to work, and the finest lands God has made are allowed to grow up into wilderness again because no one wants to work.

In Tampico, the big oil interest is begging men to work at $3.00 a day. And so it is all over the country. Either government officials are fooling themselves with the idea that the revolution is kept up by the unemployed, or they want to fool somebody else.

As I am starting to write again, I receive word that Tancitaro, a neighboring town, has fallen a prey to its native sons, who are robbing stores and destroying the archives of the town. As will be seen, Mexico has to deal rather with an anarchy than with a simple revolution. Tancitaro is close by and in my district, and they may be here before tomorrow morning.

I do not know whether you will ever get this paper, but before putting up the machine I will conclude with the following résumé:

The real cause of the revolution is to be found in the character of the people, their disinclination to work and to take advantage of the natural resources of the country, their extraordinary unfairness in their dealings, and their lack of responsibility. Their so-called grievances are pretexts only.

If in this country a man is poor, one does not need to go far to discover the cause. One can never satisfy a people that do not want to be satisfied. I believe, though, that, if the government of Wilson had recognized the Huerta regime, it would have been easier for this government to squash the uprising. The fact of recognition having been withheld has emboldened Carranza and Maytoreno, and through them the lesser leaders.

Owing to the bad management of the Madero régime, this government is short of funds, and, until recognized, it will not be able to float a loan. In the meantime the rebellion grows stronger, and, owing to this procrastination at Washington, the whole affair may cost rather dear to the United States before the thing will be over.

If Huerta was a traitor (and no one loves a traitor), that is none of our business if this people need a man like that. Porfirio Diaz did the same tricks and pretty nearly in the same way, and he was the greatest president the republic ever had.

Remember the murder of General Ignacio Martinez in Texas. Martinez, an enemy to President Gonzalez and Diaz alike, had to emigrate to Texas, where, thinking himself safe, he practiced his profession, that of medicine. One night he was called to see a patient, and next morning his body was found full of knife-wounds. Did Washington know the originators of this crime? I am inclined to think so. I know rather more than I should like to reveal, as I met one of the assassins personally. General Reyes, then governor of the state of Nuevo Leon, also knew who arranged that affair. And Doctor Martinez was only one out of several hundred that were made to disappear. I have men-

tioned him because he was silenced on United States soil.

Porfirio Diaz did do great things for Mexico, and in the Mexican way—a way the people understand and appreciate. Thirty years more of his way of governing, and the future of the people would have been assured. They are good and gentle, but they still hear, by their firesides, the deeds of their fathers extolled. Thirty years of peace was hardly sufficient to kill the desire to imitate those deeds.

Also the people were not taught that the greatest patriotic deeds are to work and make the fatherland progress. And loafing comes so easy. Madero, with his adventure, has put them back again at least another thirty years.

Now I must close. When I started this article I did not think that I might have to finish under a close call; but word just now received informs me that there may be whole bunch of fun in a few hours. So goodbye. If we come out all right, I shall let you know.

A. R. Hollman.

Apatzingan, Michoacan, Mexico.

MIDSUMMER MEANDERINGS

As August draws on, with its fields of corn, its resplendent moon, its inevitable languor, the editor's mind passes to less weighty thoughts. Was it not Spencer who said that after forty years of scientific study his mathematical sense had crowded out all perception of beauty—of "the beautiful?"

Many workers give so much attention to routine as to dull or stunt their imagination, and their powers of imagination, even if retained along soberer and scientific lines, fail to maintain the gayer range of fancy. It was Coleridge who asserted that fancy is distinct from imagination, so that a keen imagination may give rise to inventive principles. Fancy can hardly be attributed as the basis of scientific innovations.

Perhaps this may account fer the absence of those habiliments of medieval times—heraldic devices, gowns, badges, crowns, scepters, and insignia—which even today are present, symbolizing orders and social bodies. Science uses chemical symbols. Medicine still involves Jupiter in the crossed R of a prescription, some say. But this, if true, is a vestigial and historic perpetuation.

Can fancy construct a picture of the home of a famous heart specialist receiving the name "At the sign of the Foxglove?" Or of some internist employing a monogram of the leaf of liverwort?

When these men establish handsome country places, do they ornament their retreats with hedges and flowers, such as digitalis, belladonna, poppies, and the scented mints afford? Their "mints" exists only in banks, not on flowery banks, alas! And we fear fancy flees as Pope saw her escape two centuries ago—

> She comes! She comes! The sable throne behold
> Of light primeval and of chaos old!
> Before her Fancy's gilded clouds decay
> And all its varying rainbows die away.
> Wit shoots in vain its momentary fires,
> The meteor drops, and in a flash expires.
>
> * * *
>
> Philosophy that leaned on Heaven before
> Shrinks to her second cause and is no more.
> Physic of Metaphysic begs defense,
> And Metaphysic calls for aid on Sense.
> See Mystery to Mathematics fly—
> In vain! they gaze, turn giddy, rave, and die!
>
> —*The Dunciad.* (Excerpt.)

Better go out and pick a bunch of witch-hazel, to deter such a culmination!

T. H. Evans.

Freeport, N. Y.

A TRAUMATIC NEURITIS: A NEW DISEASE

At present I am sojourning at my summer-home, far from medical libraries, so that I have no chance to consult the authorities. Therefore I put forth no claim to priority, for long experience has taught me that there are others, and that very little has escaped the observation of my follow doctors. Yet, I have never found in print an account of the affection I am about to describe—and to me it is new.

Speaking in a physical sense, I have never done a day's work, my occupation, as also the occupations of my fathers, having been of an entirely sedentary nature. My muscles, therefore, are untrained and not inured to labor, although I have neglected few opportunities for exercise—rowing, gymnastics hunting and the like, and for years I have taken pleasure in chopping and sawing wood, as my good friend Abbott's summer-home woodpile eloquently demonstrates. Since acquiring my present delightful resting-place I have been very busy cutting out dead trees, clearing brush, sawing and chopping out posts, poles, stakes, stove-wood, etcetera, and the zest with which I have wielded ax, spade, saw, and bush-hook can be appreciated only by those who, like myself, have attained to

their sixty-fourth year, or thereabouts, and led an absolutely sedentary life.

Some warnings I had, in the way of numbness of parts of the hand, especially when writing or typewriting. Then came the attack—suddenly and fierce. In the night I was awakened by intense neuralgic or neurotic pains in my hands, confined now to the radial-nerve region, now to the ulnar, now affecting both, with spells of anesthesia, similarly limited.

The pain was very severe and was aggravated by cold, while slightly relieved by heat. Several times each night it seized me. In the mornings my fingers were stiff and anesthetic and putting on the garments occasioned much distress, although after a time my hands limbered up. During the day there were similar attacks though less painful, and any attempt at the use of ax or other implement brought the warning anesthesia. Return to the city, with its surcease of manual effort, was followed by a gradual subsidence of the pains; still, writing was prone to bring some of the trouble back. Nevertheless, I had forgotten until my next visit to the woods, when a similar indulgence in work redeveloped the painful trouble.

The affection is distinctly connected with the nerves, and not neuralgic. It recurs at night with an intensity resembling "jumping toothache." It continues a week or more after the work that induces it has been discontinued. It tends to recur weeks later when attempting to use pen or typewriter.

At the last attack I betook me to the city, where I consulted an expert masseur. He manipulated my hands for twenty minutes at the seance. At 2 o'clock that night I was obliged to call for relief, from another attack, and this was afforded by a similar massage.

The pains have not recurred since then, although the numbness affects my hands even now, as I write.

Inquiry shows that this affection is well known to woodsmen, who attribute it to the unconscious tendency to grasp the ax or other implement too tightly. But the singular fact, if fact it be, is, that nobody seems to have described this trouble. If so, I shall certainly expect to have it known as "Waugh's disease," and go down to posterity thus honored. But if anybody wants it together with the attendant glory, he may have it and welcome, if only he will relieve the condition with some therapeutic treatment or offer some preventive measure, and so will free me of this disability, so that I can work as I like without having to suffer for it.

W. F. Waugh.

Muskegan, Mich.

SUCCESSFUL TREATMENT OF POLIOMYELITIS

I wish to report my experience with a case of poliomyelitis in an infant ten weeks old, and in which recovery was rapid. I first saw patient on fifth day of the disease after two other doctors had pronounced it hopeless.

I found the patient apparently lifeless; the child could not move any of its limbs, even the neck muscles being paralyzed. Secretions were locked up so far as the kidneys were concerned; abdomen was tympanitic; throat, sore; tonsils, enlarged; patient swallowd with difficulty; the ciliary muscles were stationery; vision was lost; temperature, 101°F.; pulse, 120; respiration, 75; breathing, difficult.

The first thing I did was to give a warm bath, gradually cooled, for the fever; putting a cold wet cloth to the occiput and during the latter part of the bath applying cold water to the spine in order to stimulate the cell body. Next, I gave 1-10 grain doses of calomel, every two hours until eight doses were taken, following this up, in two hours, with saline laxative. As a diuretic, I gave spirit of nitrous ether, adding to each dose (and dissolving) 1-250 grain of atropine and 1-4 of the usual dose of anodyne for infants; and ordered this repeated every two hours for six or eight doses, or until the urine passed freely, and thereafter every four hours. On the next day I found some slight improvement; the child could nurse better, and the bowels had acted three or four times. The temperature was reduced to 100°F. I then ordered another dose of saline laxative, and also left a solution of strychnine and digitalin. Quinine mixed with lard was directed to be rubbed into the patient's flexures.

The next day found the patient still more improved; she could see again and smiled, and also frowned while swallowing, showing sensation was returning to the muscles of deglutition, which before were without sensation. I repeated the bath as before, and then prescribed a stimulating inunction, consisting of 2 teaspoonfuls of cottonseed oil and 5 minims of oil of turpentine, to be rubbed over the spine after the bath.

The following day I found the patient without fever and prescribed the mixture

following, also prescribing nuclein solution in minim doses given on the tongue: Quinine arsenate, gr. 1-4; bitter wine of iron, drs. 2; glycerine drs. 4; water, enough to make ozs. 2. Dose: 30 drops every four hours.

On June 5 (one day later), the patient was much improved, so that I stopped the quinine rubs, but continued the other treatment. Of course, I still gave sulphocarbolates, and calomel with aromatics, 1-10 grain, was used along with saline laxative; also the dosimetric trinity.

I dismissed the case on the 5th, so far as visits were concerned, but ordered the patient brought to my office on the 13th, when the improvement was marked. The patient now could use her arms and hands, in fact, had recovered the use of all muscles except of part of the lower extremities. This report is made on the 17th day of the disease, and I say "Hurrah" for the alkaloids. They did it.

I met Dr. Francis at DeKalb, Texas, who has been sent from Washington to try to prevent the continued spread of this dreaded disease, that is carrying the Angel of Death to so many families.

P. E. Gold.

Dalby Springs, Tex.

COX'S HIVE SYRUP—SCILLITIN

In reading of the bronchial trouble afflicting the Pope, there come to my mind the various remedies useful in such affections, and among them all I know of no more interesting drug than squills, or its glucoside, scillitin. Perhaps not every reader of The American Journal of Clinical Medicine will appreciate a bit of history connected with this drug, but I am sure here and there one of like mind with me will delight in "stogging " around among old books and pulling from under the dust of ages some hidden facts connected with the discovery or manufacture of this drug or that.

"What is this or that good for?" is a very important query; and whence it comes is no less important if we want any more of it; while to give honor to whom honor is due is just as right and important as those other matters.

Once upon a time a friend (bless his name—"I have grappled him to my soul with hoops of steel") gave me an old tome, worn, sere and yellow, and covered with the accumulated mold and dust of eighty years. Time has written upon it with its corroding finger the passing of the days. Here and there is a blot or a mark of pencil telling that someone had been drinking in knowledge at that particular fountain. Turning the browning pages, my eye catches at the heading of Syrupus Scillæ Compositus, an asterisk marked in ink, like this (*), and my eyes instinctively wander to the paragraph, because I am prone to make all kinds of hieroglyphics in my books, and they all mean something to me.

So, I began to read and found that some fond parent eighty or more years ago had, in all the anguish of his heart, sought a cure for "hives," and had found that he would have to prepare the remedy. Good! That's the very best way to get a remedy when you can't readily find one made to hand. So, then, our medic father of yore relates in his glossa that he has a family of seven children and that in their infancy they all were troubled with this disagreeable trachitis, or hives, or croup (all meaning the same), and that because of this circumstance he was compelled to study this trouble particularly.

Having found the syrup of squill, decoctions of senega and other current dope of little advantage, this doctor proceeded to combine the several remedies found most useful in such troubles into a syrup, and this concoction he called hive syrup. The preparation turned out to be very efficacious in hives, colds, coughs, and bronchitis—and here we have the history of the compound syrup of squill, as related by Coxe in his "American Dispensatory," which he published in 1830.

As a dosimetrist, I believe in prescribing single remedies; but when a happy combination does the work, that is a "single remedy" to me.

Scillitin, the active principle of scilla maritima, is easily obtainable and will answer every purpose better than the crude affair with its bark, hay, and stubble. It is best known for its beneficial influence upon the mucous membrane of the respiratory tract, increasing expectoration; whence, consequently, it is beneficial in dry, harsh, irritating coughs, but where there is no secretion, and where the sputum is scanty and tenacious. It has a soothing influence over bronchial irritation. It has other physiological effects, but these do not concern us here.

The formula for the compund syrup, as Dr. Coxe gives it, readily will be seen to be a very happy combination—seneka-root, squills, honey, tartar emetic.

M. G. Price.

Mosheim, Tenn.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

IT HAS occurred to me to write something this month that the doctors' wife may ask the "men folks" of the family to read. Many men (and women too) do not seem to understand that one may fail in his work, whatever it may be, because of neglect of health.

The necessity for good health in successful business is so little understood in this country that the citation of ill-health as a direct or contributary cause of failure in a large preponderance of cases will, probably, create surprise or draw denial. Yet, it is all of that, and more.

If business failure were traced back to its real origin, it would frequently be found in a deranged bodily condition, nearly always unsuspected by the subject, but producing nervous or psychological effects under which no man can stand up to the sharp requirements of modern commercial life.

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The actions and interactions of mind and matter, as occurring in the human organism, I need not mention here. But no consideration of them could fail to show what everyone must already know—that any disorder of the body, whether obvious or obscure, has its direct effect upon the brain. But, the brain is the instrument upon which the mind plays. If that instrument becomes disordered, it loses in just that degree the power to respond to the action of the mind.

Artemus Ward announced a broader truth than he knew when he said: "A boil is good for one thing, anyway; it takes a fellow's mind off his other troubles." No man with a really sore neck can think clearly; and a man who cannot think clearly is not fit for business, any more than a piano with slacked or raveled strings can transmit the thought behind the music.

A perfect, instant coordination between mind and brain is a first, necessary, and continuing condition with any man who is going to keep his place in the world of affairs. The moment that coordination begins to fail, work should stop and the bodily mechanism be overhauled, until the origin of the fault is found and removed. Otherwise, disaster becomes an ever growing possibility. Deferred investigation and continued strain will bring it to a certainty, sooner or later.

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Think for a moment. A man who would no more run his motor car on deflated tires or with sand in the gear-box than he would use sulphuric acid for motive power will keep going right on at his business when the tread of his own physical mechanism is flattening out and the gear-box of his mind is filling with the wrong kind of grit.

The impatient optimism that shakes off a vague oppression with the self-assurance, "I'll be all right tomorrow," has had as much to do with lengthening out the list of bankrupts as any other one thing I could mention. You can't correct a bad condition by persisting in the things that cause it. You will only make it worse. You can easily enough, if you are bull-headed enough, make it so much worse that it will "be the death of you"; or, anyway, put you out of business..

This is not a scare-talk. I do not believe in fear as a proper therapeutic element, and I am not going to spring any new psychology on you, nor any abstractions or theories. We are common-sense, every-day people, most of us, and I am writing on the level of a common understanding, and the only reason I have for giving you a bit of scolding and a little earnest entreaty in your own behalf is, that my observation as a physician has shown me unmistakably the necessity for bodily health as precedent to mental effectiveness in all the better walks of life. That is, in all pursuits and occupations that involve use of mental powers.

Bodily health is a broad term. It includes so many things, so automatic, that we are unconscious of them. Far more frequently than most people are aware an impairment of which they are wholly unconscious will produce a condition in some fold of the brain that invariably irritates and sometimes alarms them; as, for example, the sudden inability to recall a name or a word which they know perfectly well, or a date or a thing they had taken pains to fix in their memories.

The more they try to force that word out, the more impossible it becomes; but when they have given the attempt up and have shifted their thoughts to other channels, it will flash up of itself, unasked, maybe, a day or two later. There is a long line of such phenomena, but this instance will serve in speaking of them all.

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If you are a "sporty" brother, you may shake yourself impatiently and tell yourself to "come along and have a drink." Possibly the drink may work, for up to a certain movable point alcohol does give a clearing impetus to the blood and nerve-fluid circulation in the brain, and the obscured fold may be temporarily clarified; but alcohol is a dangerous expedient, and one success of that sort is very likely to encourage others, with a slight but steady increase of the trouble itself as a result.

Stimulating with it is but pouring one poison into the field of another. That is all. For these brain-clouds are the fumes arising from poisons let loose in the system through bad assimilation, improper or too much food, or from impaired excretion by the kidneys, liver, skin or intestinal apparatus —slow, low poisons, which for a long time may not show themselves in any other way, but that will surely go on doing their dirty work until you either give up and go under treatment, or bungle your life and business to a finish—one or the other of them. Your business, whether, or not.

No one needs to be told what is going to happen with a business run by a man whose brain is thus befogged, even though the fogs be intermittent. It doesn't matter how keen his mind may be. If he cannot use his brain and get instantaneous response at will and at all times, he might as well be without a mind.

And how long would a man without a mind last in business? How long does a chicken live when its head is cut off? A few flops more or less, a good deal of nastiness and it is all over. A man may be a bird in business as long as he has his head. But the only lingering use of a headless bird appears in the form of a feather duster. Draw your own moral from that.

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Of one thing you may be entirely sure. No man's business can be impaired by his health being good. Have you ever heard of a business failure being brought on by good health? Not on your hygienics, you haven't. On the contrary, I can show you by the experience of nations, almost of races, that solidly built, solidly extended, solidly maintained, and soundly successful business, is the property of whole peoples where care of the health comes before business cares—every time.

Take your Englishman, for example, or the German, the Flemings, the Scandinavian stosks, or among Latins, the French. They *eat* and they rest. They hold health above everything for they know that if they are to work they must be well, and keep well. They are never in a hurry. We would call them slow. They call us crazy. We do things with a rush. They do things deliberately. We do not get any more done than do they, taking one year with the other; but we wear ourselves out faster, because we subordinate everything else to business, letting health go to the devil, and take us along, if needs be, if only we grab the coin; while they let the coin go to where we let our health go, or at least thay take its chance so long as they need the rest or recreation.

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A business man of western or northwestern Europe never lets anything interfere with his care for himself. He lives by the rule that health comes first; all else must give way for the absolute operation of that rule. We cannot sneer at him and his ways as belonging in an ancient order of things, inferior to our newer ones. For refutation of such a sneer it is necessary to go back to the tremendous prosperity of the lowland countries during those eighty years of horror when they were being swept across and across, time after time, by the most appalling wars we know of in that sickening conflict with Spain.

The Holland merchants who spread their commerce to the furtherest seas, while its roots were kept with Holland's blood, were neither weaklings nor loiterers. The gentlemen-adventurers of Elizabeth's time who carried English speech and English trade to every shore, who won for us the land we live in now were no "slow pokes"—they were heavy smiters, who praised God heartily but also ate heartily, who endured cheerfully but enjoyed their leisure when endurance was not forced on them.

And look at the Old Viking fellows. It was fight and feed with them: fight, whenever they found a chance for it; but feed for sure, and sleep it off solidly, to be ready for the next combat. Consider, also, the soldiers and sailors and wonderful explorers who graced the reigns of those two particularly disgraceful kings, of France, Louis XIII and

Louis XIV. Feeders, outdoor-men—going abroad to find new homes for a nation of feeders and outdoor men.

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The present business men of those countries live in and by an order that was already hereditary three hundred years ago, when those old fellows were fighting and feeding, that today's business men might come into the world, to sustain great populations.

Do not for a moment think the modern business conditions in Europe are any easier; than our own. They are different, of course but they are just as full of close work, competition, emulation as ours. Worse—with us, a man may fail repeatedly and still come back. Not so over there. With them, when you go out, you stay out. The shadow of failure will follow one like the shadow of one's body, as long as one lives; and it is a shadow that all men sidestep at sight.

Simply, a man can't afford to fail over there, in Europe. He can't work if he is sick. Therefore, he takes all manner of pains to keep well. If he finds he can't, he will go away until he finds *himself*. And then you couldn't keep him off the job.

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The business man of the old world has a few laws for the government of himself: He must have time to sleep. He must have time for his meals. He must not touch alcoholics during business hours. He must not take his business home with him. Read these words over once more.

In all Europe, there is no such thing as our frantic lunch-counter. We have the best dentists in the world, because we of America bolt our food, and as a consequence digest it so badly that our teeth rot early in life and we then neglect them until only the very best dentists can do anything with them at all. That isn't the worst of it. The stuff we eat and the way we eat it, and then tear back to work while poor old Mr. Digestion is trying to get our attention, clogs the systen with broken-down waste matter, whence evolve the brain-clouding poisons I have spoken of. And still we keep at it!

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The Treatment of Neuralgia

The recollection, that neuralgic pain is usually only the manisfestation of some other underlying difficulty and that careful search for, and the discovery of this difficulty, together with its consequent removal, will relieve the neuralgia, is perhaps the most important part of the treatment of this affection. At the same time, patients suffering from neuralgic pain urgently demand speedy relief, and therefore it behooves the physician to have ready for instant employment a certain class of drugs that are known to exercise a sedative influence upon nerves or nerve-centers which are giving pain because of the irritability.

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Among the common causes of neuralgia, aside from those conditions which depend upon organic lesions in nerve-centers, are anemia, eye-strain, the condition called uric acidemia and the other disorders of metabolism closely associated with a rheumatic or gouty diathesis, carious teeth, nervous exhaustion, and, finally, the abuse of such drugs as coffee and tobacco. It is surprising how frequently the arrest of the tobacco-habit in men will cause neuralgic symptoms to disappear, or the stopping of the excessive indulgence in, coffee by women will to them result in benefit.

These neuralgic manifestations by no means infrequently affect portions of the body other than the head; for often violent abdominal neuralgia, thoracic pains or neuralgic ovarian tenderness take the place of cephalalgia.

It cannot be doubted that there are two sorts of neuralgia differing from each other in almost every respect, but which, nevertheless, altogether too often are confounded. One of these neuralgic manifestations proceeds or arises from a local and circumscribed cause, which in some cases may be removed by a surgical operation. The other form appears to depend upon a constitutional cause—that is, upon great derangement of the general health—and it can be treated successfully only by attention to this specific derangement. The latter variety most commonly is seated in some of the most superficial nerves, returns at irregular intervals, induces little or no change in the appearance of the part affected (either during life or when examined after death), and may, therefore, be supposed to have a constitutional, or systemic, origin, and not merely a local and circumscribed one.

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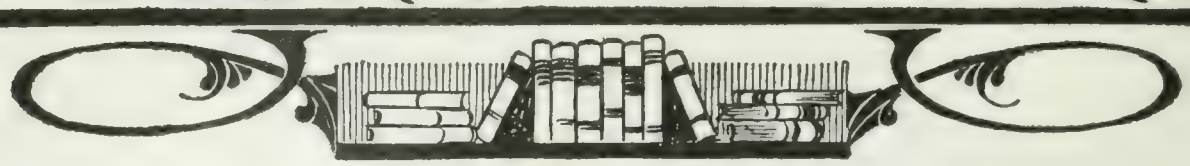
Some persons consider neuralgia to be dependent upon an inflammatory state of some portion of the nervous system, but I do not consider this correct. It is by no means rare to meet with individuals who, without any physical or rational sign or organic disease, and sometimes even while enjoying the most perfect health in other respects, suffer acute pain—in the interior of the chest.

AMONG the BOOKS



FRENCH: "LABORATORY METHODS"

Medical Laboratory Methods and Tests. By Herbert French, M. A., M. D., assistant physician at Guy's Hospital, London. Third edition. Chicago: The Chicago Medical Book Company. 1913. Price $1.50

In our editorial pages this month, we have taken occasion to urge upon our readers the importance of availing themselves of all the modern agencies and facilities of diagnosis in their everyday practice, especially the socalled "clinical diagnosis" of the present day—so named, we presume, because it is not to be done at the bedside, but in the laboratory.

Some of these methods and tests, we realize, are too complex and difficult to be undertaken by the general practitioner or under any other than actual laboratory conditions. But many of them are simple and easy to carry out, and can very readily be conducted by the doctor himself, in his own amateur laboratory, with the plain directions contained in a small working-manual.

Such a manual is this of Dr. French's, and one of the best that we have ever looked into. It confines itself to the commoner diagnostic procedures which the average physician is likely to carry out himself, and gives brief, clear, practical instructions, easily understood and put into practice, such as the Englishman seems peculiarly fitted to give. The plates are exceedingly beautiful and illuminating.

KEEN: "SURGERY"

Surgery: Its Principles and Practice. By Various Authors. Edited by William Williams Keen, M. D., LL.D., Volume VI. With 519 illustrations, 22 of them in colors. Philadelphia and London: The W. B. Saunders Company. 1913. Price $7.00.

This volume of Keen's monumental work has no regular place in the series, but represents an additional contribution, in an effort to compensate for the time that has elapsed since the publication of the first volume and the progress that has been made in the interval.

The authors were requested, as the publishers tell us in the preface, to "furnish supplementary matter, so as to bring their chapters fully abreast of the present status of surgery."

So, in this volume, we find chapters on Crile's anoci-association theory of shock, the newer methods of anesthesia, the modern treatment of cancer, the use of salvarsan in syphilis, surgery of the hypophysis, and so on. Above all, there is an extensive contribution on the surgery of the thorax, in which, perhaps, there has been more advance in the last five years than in any other branch.

The list of contributors to this supplementary volume is a distinguished and representative one, and the work is worthy of the galaxy of its coworkers. Both editors and the publishers are to be congratulated upon their rare discrimination in thus putting a a greatly needed finishing touch to an otherwise adequate undertaking.

FOWLER: "THE OPERATING-ROOM"

The Operating-room and the Patient. By Russell S. Fowler, M. D., chief surgeon of the German Hospital, Brooklyn, N. Y. Third edition, re-written and enlarged with 212 illustrations. Philadelphia and London: The W. B. Saunders Company, 1913. Price $3.50.

This book may be regarded as the field-manual of the surgeon, and of every physician who is confronted (as every physician is occasionally confronted) with the necessity of doing his own operating. It has nothing to say about the principles of surgery, the indications or probable results of this or that operation. It does not even offer any discrimination between various methods of operating.

The work's function is confined exclusively to a description of the technic involved in the surgery of different parts of the body; the preparation of the patient for operation, and his care afterward; and the instruments re-

quired, their care and use. So far as we are aware, this is the only book extant, at least in American literature, that treats of this aspect of surgery in just this particular way and with this degree of comprehensiveness. Hence we are not surprised to find it already running into its third edition within six years after its first appearance.

It is, of course, a work the nature of which demands constant and alert revision, since technical methods and armamentaria are continually changing and improving. And the author is thoroughly awake to the necessity of this. The present edition brings everything up to date, and should replace the former ones found on any doctor's bookshelf. For those who do not possess the work, this is a capital time to get it.

ROSENAU: "PREVENTIVE MEDICINE"

Preventive Medicine and Hygiene. By Milton J. Rosenau, professor of preventive medicine and hygiene at Harvard; formerly director of the Hygienic Laboratory of the U. S. Health Service. New York and London: D. Appleton & Co. 1913. Price $6.00

With his characteristic thoroughness, Dr. Rosenau has given us one of the most comprehensive summaries of the present-day status of preventive medicine and hygiene that has yet appeared in medical literature. He has the rare faculty which is found only in great scientists—which, indeed, makes a man a great scientist—of following out details without losing perspective. He is able, as some epigrammatist has said, to "walk in procession and to sit in the review-stand and watch himself go by."

Dr. Rosenau, who himself has contributed no mean part to the outworking of certain phases of hygiene and preventive medicine, is yet able to assemble and select and evaluate, with masterly discrimination, all the permanent results of his own and others' work in this ever-increasing department of science into a coherent and meaningful generalization of the subject.

Apart from its working-value, his book makes fascinating reading. This feature, however, would appear to inhere to the subject, rather than to the style; for it would be an injustice to the author to suggest that he aimed at any such effect.

The book is primarily and preeminently a practical treatise; its purpose is to put the fruits of the last quarter century into concrete, usable form. And it will not be the author's fault if this purpose fails of fulfillment in the daily practice of those who read.

FAUGHT: "BLOOD PRESSURE"

Blood Pressure from the Clinical Standpoint. By Francis Ashley Faught, M. D., Instructor in Medicine at the Medico-Chirurgical College of Philadelphia. Illustrated Philadelphia and London: W. B. Saunders & Co. 1913. Price $3.00.

The sphygmomanometer has now become a part of the armamentarium of almost every practicing physician. At all events, it ought to be included in his equipment. And the knowledge of how to use it, and how to interpret its findings, ought to be an integral part of his mental equipment. It can hardly be doubted, however, that to many even among those who are using this instrument, it has but a very superficial and dubious significance, not so much because of a lack of mechanical skill in adjusting and reading it, but rather for want of a clear, elemental understanding of the physiological factors that underlie blood pressure, and therefore of a proper appreciation of the conditions to which it is an index.

All of this information is set forth in Faught's book and specific application made to the various disease-complexes in which blood pressure is a diagnostic symptom. A perusal and digestion of this book will transform, for the practitioner, his sphygmomanometer from a mere perfunctory instrument of routine into a genuine agent of most vital and essential information. We cordially commend it to every physician who already uses the clinical diagnostique of blood pressure or who is desirous of availing himself of its aid.

ADAMI: "OPHTHALMOSCOPIC DIAGNOSIS"

Ophthalmoscopic Diagnosis: Based on Typical Pictures of the Fundus of the Eye, With Special Reference to the Needs of General Practitioners and students. By Dr. C. Adami, Assistant at the Kgl. Univ.-Augenklinik, at Berlin. Translated by Matthias L. Foster, M. D., With 86 colored plates and 18 illustrations. The Rebman Company. 1913. Price $6.00.

The reviewer flattered himself that he knew something about the diagnostic range of the opthalmoscope, but must confess that in looking into this latest atlas, compiled by Dr. Adami, he feels a good deal as Keats

said was his sensation when he looked into Chapman's translation of Homer—"like some watcher of the skies when some new planet sweeps into his ken." It makes one itch to grab his ophthalmoscope—or to buy one if not already possesed of such an instrument —and go out and waylay people on the street and examine their funduses, whether they will or not, just to see the many and wonderful things that Adami tells us can be seen through it.

And with what illustrations does he back up his marvelous assertions! They are the most marvelous, and the most instructive, part of the entire volume. Frankly, we are delighted with the work. It is a masterpiece in every respect, and that upon everybody's part from author to publisher. The original work that it represents is prodigious; the artistic skill surpasses anything ever displayed in books produced in our country; and the physical qualities are correspondingly excellent.

It is a great pity every physician does not possess and make use of an ophthalmoscope. With this instrument and this book, any doctor could add an extensive and valuable area to his domain of modern diagnostique.

WILLIAMS: "LABORATORY METHODS"

Laboratory Methods, With Special Reference to the Needs of the General Practitioner. By B. G. R. Williams, Assisted by E. G. C. Williams, With an Introduction by Victor C. Vaughan, M. D., dean of the Department of Medicine and Surgery of the University of Michigan. St. Louis: The C. V. Mosby Company. 1913. Price $2.50.

Readers of CLINICAL MEDICINE already have made the acquaintance of the author of this little book through the valuable articles which he has contributed from time to time, to this journal on the subject indicated in its title. Not only will they need no introduction of or to the author himself, but they will require no persuasion from the reviewer that the book is well worth their looking into.

For our own part, we have seldom met with a writer who knows, as Dr. Williams does, how to make the subject of laboratory methods, which of itself can hardly fail to be somewhat tedious, not to say dry, a topic of absorbing interest. He makes the dry bones live. Nay, more—he knows how to breathe positive inspiration and enthusiasm into suggestions and instructions, so that one is seized with an irresistible desire to get up and do the things he describes.

Dr. Williams is a man of imagination; and that is what makes work inspiring, after all. The very titles of his chapters are alive with it. "Vascular Dramas"—who but Williams would have thought of such a caption? And who can resist the call that it makes to one's own imaginative faculty?

Technically, the work covers all the laboratory procedures that the general practitioner is likely to need, and covers them in helpful, illuminative fashion. Certainly, if we were looking for a manual on laboratory methods, we should choose a vital, genial, and withal scientific book like this of Dr. Williams.

MASON: "THE VILLAGE MYSTERY"

The Village Mystery and Through War to Peace. By Benjamin F. Mason. New York: Broadway Publishing Company, 835 Broadway.

Here is an interesting story written by a doctor, one which is filled with thrilling episodes, and will certainly hold the attention of the reader. Now that we are living over again the great tragedies of the Civil War and have just celebrated the fiftieth anniversary of the battle of Gettysburg, Dr. Mason's book will find many readers among the old soldiers, who in its pages will be reminded of the victories and defeats of half a century ago.

"RIEDEL'S BERICHTE," AND "RIEDEL'S MENTOR"

"Riedel's Reports," which is issued annually by the J. D. Riedel Akiengesellschaf (Berlin) always contain a large amount of interesting information. In the first part of the present issue there are a number of papers on chemical investigations, while the second part contains a pharmaco-therapeutic review of the most important contributions published during the preceding year. Part III gives the names, compositions, characteristics of and indications for the newer remedies, specialties, and technical products, while in Part IV the firm's pharmaceutical specialties are listed. We understand that a copy of this interesting annual report (which is printed in German) can be obtained by addressing Messrs. Riedel & Co., 29-35 W. 32d St., New York City.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5932.—"Albuminuria of Pregnancy." F. P. G., Kansas, writes for information as to "treatment in a case of pregnancy (eighth month), where there is scanty urine containing a small percentage of albumin but no edema of feet, face or hands perceptible. The patient had a slight headache one day. There is a tendency toward constipation, but a daily movement is secured by the aid of saline laxative.

Albuminuria of pregnancy when presenting itself in mild form, usually disappears after a course of arbutin, cleaning out first with a few small doses of calomel and podophyllin and following with a laxative saline draught. The writer usually adopts this course: Calomel, gr. 1-6, and podophyllin, gr. 1-6, at 7 and at 8 o'clock p. m., repeated every third night for nine days; and a saline laxative three times daily, between meals, with a glass of water or, preferably, thin barley water. It is essential, of course, to keep the patient's skin active and to regulate her diet.

There is a wide difference of opinion among observers as to what amount of albumin in the urine of the pregnant woman is to be considered pathological. Examination of statistics leads us to believe that albuminuria occurs in at least 25 percent of pregnant women. Dumas finds albumin in 1 specimen out of every five, and Parvin encountered it in 6 percent of his cases. It is unquestionably more frequent in primaparas than in multiparaes, and infinitely more common late than in earlier months.

The presence of albumin under the circumstances in question may be owing to: (1) direct irritation of the kidney and the result of an altered condition and greater impurity of the blood; (2) pressure upon the renal veins by the enlarged womb—a condition similar to the congestive albuminuria of cardiac diseases; (3) pressure on the uterus; (4) anemia of the kidneys, produced reflexly by stimuli from the genital organs; (5) anemia caused by blocking of the renal vessels by minute emboli, resulting from the presence of a ferment in the blood or of placental origin.

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QUERY 5933.—"Emetine as a cure for Dysentery." G. A. B., Massachusetts, asks for detailed information relative to the treatment of dysentery with emetine hypodermically administered. He also wishes to know whether the drug is effective in dysentery other than that owing to the presence of amebæ.

To begin with, we would call special attention to an article which appeared in CLINICAL MEDICINE for July (page 593). This contains considerable germaine information.

Dr. Lyons, of New Orleans, has utilized emetine in six cases. All but one of these patients recovered, and he was practically in a moribund condition when first seen. The average length of treatment with this drug until the stools become normal was nine days for the five who got well; and it would have been still shorter, he thinks, if the emetine hydrochloride in capsules had been employed throughout. The average total dosage was 2.6 grains, which is a little larger than that given by Rogers. The preparation was made up by a local druggist and at times caused a little irritation and infiltration, on account of a slight excess of acid.

The advantages of the subcutaneous injection of emetine treatment are summarized by Lyons as: (1) Simplicity and ease of administration of the drug. (2) Absence of pain, vomiting, and depression. (3) Accurate dosage (no loss through the bowels). (4) Rapid absorption and effect. (5) Reliability of the product (hydrochloride).

While the time which has elapsed is as yet too short to enable one to speak with absolute certainty as to the cures, he believes that the results are highly suggestive and that we have in emetine an ideal method of treating amebic disease.

Subbish, in *The Indian Medical Journal*, reports his experience with emetine in the case of a Sepoy who had been in the hospital affected with this disease for nearly three months.

"On August 4, 1912, he had sixteen motions during the day, with severe tenesmus. The motions contained only blood and mucus. Liver tender on pressure, but not enlarged. He was given castor oil and opium in the morning and 30 grains of ipecac in the evening, which he vomited. August 5: Had twenty-three motions during the day. A dose of 20 grains of ipecac with laudanum was administered, but was not retained. No improvement; much tormina. August 6: A dose of 40 grains of ipecac and 10 grains of tannic acid was given, but was not retained; improvement in the stools nor in the general condition. Colon hard to touch.

"August 7: Had twelve stools. Could not retain the ipecac, and his condition became worse. Now 1-4 grain of emetine hydrochloride dissolved in sterile salt solution was injected hypodermically in the arm; there was neither vomiting nor were there any local signs or irritation. He passed only two motions during twelve hours. The stools contained a little blood and mucus. August 8: Emetine injection was repeated. Had only four motions; free from blood and mucus. There was a distinct improvement. August 9: Emetine injection was given again; there was no vomiting; had only two motions during the day. He had an uninterrupted progress.

"Emetine hydrochloride, the active principle of ipecacuanha, had, undoubtedly, a very salient effect in this case," says Dr. Subbish. "Its action was very rapid, without any tendency to nausea or vomiting. There were no signs of irritation. It is, therefore, in every way superior to ipecacuanha."

Roger's article on the "Rapid and Radical Cure of Amebic Dysentery and Hepatitis by the Hypodermic Injection of Soluble Salts of Emetine," appears in *The Therapeutic Gazette* for December 15, 1912. We suggest that you procure a copy.

Rogers finds that emetine hydrochloride can safely be injected intravenously in considerable-sized doses. For instance, in the morning, he gave a patient 1-2 grain of the drug dissolved in 5 Cc. of normal saline solution, injection being made in the median basilic vein. In the evening of the same day, he administered 2-3 grain; and a day later, 1 grain, in the same way, in addition to several subcutaneous injections. "Although large, black sloughs were being passed," Rogers says, "the dysenteric symptoms rapidly cleared up."

Under the circumstances, it is evident that a comparatively large dose of emetine hydrochloride may be given hypodermically, subcutaneously or intravenously.

We would be inclined to give 1-3 to 1 grain hypodermically, two or three times daily; in desperate cases, 2-3 grain intravenously; hypodermically, two or three times daily; in desperate cases, 2-3 grain intravenously; repeating the dose, if necessary, within twenty-four hours. At the same time, a 1:1000 solution of quinine hydrochloride (or sulphate) should be introduced well up into the bowel through a soft-rubber tube.

The Medical Department, U. S. A., is now experimenting with emetine, and interesting reports from that source doubtless will soon be forthcoming. The European medical press contain numerous articles upon the subject, and in practically every instance the writers report most satisfactory results. Full abstracts of these will be found in the department of CLINICAL MEDICINE, "What Others Are Doing," for the last six months. Several will be found in this issue. Also read Roemer's article, August number.

Emetine is of value in *all* forms of dysentery. The drug relieves alimentary congestion and, increasing capillary innervations, checks choleraic discharges. Moreover, it restores biliary secretion without producing catharsis; while the secretions it incites are normal in character. However, it is only *specific* in the amebic form. This form it can be depended upon to cure positively and quickly because, in sufficient concentration in the blood, it kills the amebas.

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QUERY 5934.—"Infantile Convulsions." J. W. C., Massachusetts, writes: "As CLINICAL MEDICINE has been coming to me for more than ten years and I have been a constant user of alkaloidal granules for that length of time, I feel acquainted enough to risk bothering you to help us clear up a question.

"Responding to a hurry-call, I found an Italian baby seven months old, fat and large for her age, in convulsions, not very severe but constant. I was told that she had been

sick two days, and the regular physician called it a 'cold.' Two hours before my arrival the convulsions set in. The temperature (rectal) was 103 1-2°F.; skin felt cold and dry; eyes were clear and anemic, pupils dilated, especially when a convulsion occurred; skin was white (waxy); lips, dark; tongue, pale; there was profuse salivation; I could not feel the pulse at the wrist; the lungs were so noisy all over that I could not elicit the heart-sounds; the child's breathing was difficult and shallow; the bowels had moved four times that morning, and an enema brought away a small quantity of green mucous without strong odor; the bowel was soft, not bloated; consciousness was gone, also, the reflexes; the neck was flaccid, the child did not retract the head.

"I tried a solution containing glonoin and atropine, in an effort to bring the blood to the surface, and rubbed the child's body with a counterirritant solution. Italian people are so averse to bathing a sick child I delayed the mustard bath. Ten minutes after I arrived the child stopped breathing. The heart continued to beat a minute longer.

"The family physician had called that forenoon and left aconitine granules, 1-800 grain to be given every hour on the tongue with a little water. They had given the baby three doses an hour apart (dry, as directed), when convulsions commenced. The doctor tells me he gave three or four doses, fifteen minutes apart, when he first saw the child. He has given the same to other (older) children. I took one of the granules (dry) and crunched it up, and in a minute my mouth was tingling and I found it hard to talk, because of a spasmodic feeling in the throat.

"Now the question: Did the aconitine have anything to do with causing the convulsions and death? It seemed to me that the dose was too large for a seven-months'-old baby; and, given dry, the aconitine exerted its full effect on the throat, causing a spasm there and of the respiratory muscles. The doctor who is mentioned is a friend of mine and I am writing so that we may both learn something about giving potent alkaloids to children. I am much more cautious myself, always giving a weak solution to an infant."

After careful consideration of the clinical data presented, we are inclined to advance the opinion that the child was practically moribund before you arrived, the evidence of asphyxiation being very marked. Not infrequently infants suffering from severe capillary bronchitis are "smothered by their own secretions." Twenty-four hours earlier in the disease, we would have placed the child in a hot mustard-bath and administered medicated steam, and given, internally apomorphine, with lobeloid following.

Aconitine in full doses was not exactly the right remedy in this instance. Certainly we would hesitate to give 1-800 of a grain of aconitine every fifteen minutes for an hour to a 7-months'-old child, especially if marked respiratory embarrassment existed. You are quite correct, doctor. It is always preferable to give aconitine in solution, and before exhibiting the drug free elimination should be secured, while the heart is supported with cactoid and small doses of brucine.

Under the circumstances, while it would not be fair to say that aconitine, as administered, caused the convulsions or hastened the fatal termination, we are of the opinion that in such cases much smaller doses should be given, i.e., one-sixth to one-twelfth of a standard (gr. 1-800) granule in thirty or sixty minims of water, this to be repeated at frequent intervals; being sure that thorough elimination first has been secured.

Oxygen would have been a valuable therapeutic agent under the circumstances, and we are satisfied that the lives of several little ones have been saved by us with the portable apparatus invented by Dr. Booth. See the article on the treatment of bronchopneumonia in "Everyday Diseases of Children." The treatment there outlined has proven extremely efficacious in the hands of hundreds of practitioners.

As you will note, for young children a combination of aconitine, veratrine, and digitalin is recommended in that book—one-fourth of a granule at a dose. The local application of equal parts of methyl salicylate and guaiacol in lanolin has proven extremely beneficial. A high enema in this case, and a single dose of apomorphine (hypodermically), even when you arrived, might, possibly, have produced a change for the better; but, as we have already stated, we believe the little one was entirely beyond help when you first saw her.

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QUERY 5935.—"Seborrheic Eczema." J. W. Y., Mississippi, is treating two patients, each of whom have some small ugly sores on the face and nose, which scab over, but the scabs drop off every few days and leave ugly red sores; there is no pain and no surrounding infiltration. Both patients are in "first-class condition," yet, these lesions have persisted for two years or longer. One of the men was cured once by treatment with the copper electrode, and remained "cured" for a year

or longer; however, the sores have reappeared. The doctor asks whether dermal caustic would prove beneficial.

In our judgment, caustics of any kind are contraindicated in these cases; but several questions present themselves, as for instance, how large are they? How old are the patients? What is the anamnesis? We think it would be well to have the scales examined by a good pathologist.

We have an idea that thuja and methylene-blue, with perhaps the addition of bichloride of mercury, would prove effective. If there is any ulceration or destruction of tissue, the possibility of epithelioma must not be forgotten. You do not describe the color of the scab nor state whether the base is moist or dry. In eczema, the scales usually are yellowish and greasy; psoriastic patches are gray, hard and dry. The nose is a favorite locality for seborrheic eczema; in psoriasis, similar patches are often observed, but the itching is usually absent, and there is very little, if any infiltration of the surrounding tissues.

You can readily see how important it is that a diagnosis be made before instituting treatment. Have you examined the blood of these patients? There is probably some marked disorder of the body-chemistry.

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QUERY 5936.—"Hematemesis of Traumatic Origin." R. T. L., Georgia, presents the following clinical data and asks for diagnostic and therapeutic suggestions.

"The patient a young man, age 30, of good habits and family history. Four years ago a horse stepped on the right side of his stomach; and he vomited blood for several days, after that, vomiting and pains ceased. Six months later, he was attacked with something like hiccough, which caused the whole body to jerk, giving excruciating pains in the duodenal end of stomach; and these seizures have been taking place at intervals ever since then (3½ years). As much as a full year has elapsed between attacks. At present he experiences pain after eating, and this is relieved by vomiting—red blood being in the vomitus and also in the stools."

The doctor was with this patient during one of these "hiccough" spells. A quantity of blood was vomited just before the jerking set in. This jerking, starting first in the stomach, gradually extended over the entire body. The patient complained of "awful pain in the region of the stomach where the horse had placed its hoof, and he explained that the "pain there feels as if someone were stabbing him through with a knife." He retained consciousness until sleep was induced by means of opiates. Two H-M-C tablets administered hypodermatically relieved him and he slept nearly all next day. The patient is a hearty eater, and, being a farmer, a hard worker.

Our correspondent considers that this young man presents all the symptoms of gastric ulcer, but is puzzled by those "awful spells." He writes: "I have never seen a man suffer more intensely and not loose his mind. The spell leaves him very sore over the stomach for several days. He has lost weight in the last month, dropping from 135 to 108 pounds. Could the horse have made a wound in the stomach that has become chronic, causing this trouble, or is it simply a case of ulcer?"

In order to make a definite diagnosis, doctor, it is absolutely necessary to examine the stomach contents, giving a Boas or Ewald test-meal and withdrawing the contents one hour later. Subsequent lavage with a resorcinated solution of calendula, or with calendula and hamamelis lessens the liability to hemorrhage.

It is advisable to pass the stomach-tube about ten days after a hemorrhage. Examination of the stools is also desirable.

Several writers advance the opinion that trauma cannot produce gastric ulcer, unless other conditions are associated. Blows, falls and the like may produce severe damage to the mucous and marked hemorrhage, without production ultimately of ulcer. However, in our opinion, traumatism may be an important factor; in this way a hematoma may be produced in the stomach-wall this interfering with .the nutrition of parts, and together with the coexistence of a hyperchlorhydria, tends to the formation of an ulcer.

Virchow advances the theory that ulceration may result from plugging of the artery by a thrombus, the infarction being destroyed by the gastric juice.

Einhorn has demonstrated that erosions of the gastric mucosa are a clinical entity, and that ulcer need not result. Local interference with the circulation, and a concomitant hyperchlorydria, with resultant necrosis, are probably the most frequent causes.

It is impossible, of course, to venture an opinion as to the exact character or extent of the lesion in your patient.

Singultus and spasmodic conditions not infrequently accompany chronic ulcer. We need not tell you, of course, that convulsions or tetanic attacks frequently occur in the later stages. It is possible that some kind of traumatism of the liver also is a feature.

All considered, the singultus would lead us to suspect perforation, with involvement of the phrenic nerve, possibly a subphrenic abscess.

In perforation with circumscribed abscess formation, the symptoms are: sudden pain, muscular rigidity, distention of the abdomen and tenderness on pressure, singultus, vomiting, cold sweat, rapid and feeble pulse followed by a rise of temperature.

As you readily will understand, a very careful examination must be instituted, and if the patient is in a position to bear the expense, we strongly urge you to take him to a thoroughly competent man specializing in diseases of the stomach and intestines.

You do not say how often these attacks occur, neither do you give us any idea of hepatic, gastric, and intestinal conditions revealed by palpation, percussion and so on.

When sending a specimen of the stomach contents, give full clinical data, doctor, and we shall then be able to discuss this matter more intelligently.

In the meantime, we should be inclined to put the patient in bed, wash out the stomach carefully, and institute rectal feeding. Condurangin and chelidonin may be given internally, with silver oxide and hydrastoid as alternants. Nuclein in large doses on an empty stomach also proves extremely useful.

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QUERY 5937.—"A Suspected Venereal Infection of a Young Wife." S., Arkansas, has a patient, a married woman 18 years old, who three days after marriage became sore and had a purulent discharge from the vagina. Seemingly she recovered, but one month later two sores came, which itched and were hard. They healed under specific treatment. A week ago another lesion appeared in another place. Our correspondent asks: "What is it? Can the secondary symptoms be cured, and the tertiary prevented? I want to know, for I may be before the court in a divorce suit. Could syphilis and gleet coexist and cause itching?"

It is impossible, of course, to say that your patient is not syphilitic, but, from the limited information conveyed, we are inclined to think that the young wife contracted gonorrhea and the sores you speak of probably are due to infection of the vulvovaginal glands. Had you given their location and described them more difinitely, we could express a more positive opinion.

The typical chancre (the initial sore of syphilis) hardly can be mistaken. You say that three days after marriage a vaginal discharge was noticed; but just such signs of gonorrheal infection show in from one to four days. Of course, it is possible that infection was not a specific one, but rather brought on by rough treatment, You say this discharge cleared and that a month later two sores came which itched, but healed after treatment. You do not give us any idea of the character or location of the lesion, neither do you describe the third sore, which you say appeared a week later.

Have you examined the man? What is the history there? It is quite possible that the man is responsible, especially if the woman, as you say, is of "good character." Thousands of young wives are infected in just this way by ignorant or conscienceless men. Syphilis, of course, can be cured.

No secondary symptoms of lues seem to have made their appearance. Usually they show in from six to twelve weeks after the appearance of the chancre. Sometimes a pronounced fever is observed, followed in a day or two by an eruption; but more frequently there is a slight rise of temperature, accompanied by a macular and papular eruption over the body and limbs, which does not itch. It may last a week, or so, and then disappear. Pustules occasionally are observed, or, squamous eruptions. The throat and mouth should be examined for mucous patches, and the axillæ, perineum, groins, margins of the mouth and anus, and inner surfaces of the labia for condylomata.

Before giving expert evidence or even instituting definite medication, investigate matters thoroughly. A sample of the discharge should be examined for gonococci, and a Wassermann test should be made with the blood. Secure these before proceeding further. If the young woman *is* syphilitic, and, as you say, "of good character," you will find evidence of the disease in her husband. If, on the other hand, she was infected with the Neisser bacillus (gonorrhea), uncured gonorrhea will exist in the husband.

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QUERY 5938.—"Cirrhosis of the Liver." J. M., Illinois, asks whether it is possible to outline an effective treatment for cirrhosis of the liver.

Unfortunately, it is difficult (practically impossible, in fact) to prescribe intelligently for "hepatic cirrhosis." Treatment must of necessity be based upon a knowledge of causative and present (resultant conditions). If the etiologic factors could be controlled before regenerative processes are exhausted or extensive degeneration has resulted in the

formation of connective tissue, the life of the individual might be materially prolonged.

Abuse of alcohol undoubtedly is the commonest etiologic factor, and in the earlier stages of such cases much may be done for the patient, but when decided signs of portal obstruction (ascites, peripheral edema, enlarged abdominal veins, etc.) make their appearance the outlook is decidedly gloomy. Rest is indicated, and cardiac insufficiency demands the use of some form of digitalis—digitalin, digipoten, caffeine, scillitin, blue mass and soda (or calomel), and apocynin in full doses prove beneficial. We have had excellent results from a combination of apocynin, scillitin, and caffeine, alternated with asparagin.

Frequently peritonitis is a complication of cirrhosis; little though, can be expected from laparotomy. Tapping may have to be repeated frequently.

Do not forget the distinction between ascites the result of cirrhosis, and ascites asociated with cirrhosis, but owing to another cause, tapping seldom is required more than once and is soon followed by death. It is the present opinion of observant clinicians that, when ascites develops while the general condition of the patient is good, it is probably in part the result of chronic peritonitis; and it becomes a question whether it is more advisable to begin tapping or to do the Talma-Morrison operation.

The writer would advocate operation in the early stages, when there is no jaundice, no evidence of toxemia, and where the condition of the heart and kidneys is good. After cachexia is evident and the above complications are present, operative interference could only hasten death. Where operation is contraindicated, tapping should be done just as soon as distention becomes uncomfortable and medical measures are proving ineffectual. It is understood, of course, that diuretics prove more efficacious after the pressure of the ascetic fluid has been removed.

We would be inclined to give, in this case, euonymoid and myricoid three or four times daily, in alternation with the diuretics and cardiants already suggested. A laxative saline draught should be administered every morning. In addition, you might advantageously inunct ointment of potassium iodide over the liver.

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QUERY 5939.—"Gonorrhea in a Female Child." E. H. F., Indiana, desires assistance in the first case of gonorrhea in a girl child he has ever seen. The little patient is six years old.

Gonorrheal vulvovaginitis in a child is not infrequent, although as a rule, occurring among the poorer classes. Not infrequently, the infection is transmitted from an adult to the child when the latter sleeps in an infected bed; cases also are on record where the mother or nurse suffering from vulvovaginitis has infected the child. Still, infection through congress is not uncommon, the idea unfortunately prevailing among many ignorant foreigners that the disease may be gotten rid of by cohabitation with a virgin. Obviously, little children many times are the victims of conscienceless beasts.

Treatment necessarily depends to a very considerable extent upon the infection, the length of time the disease has existed, and other considerations.

A 25-percent solution of argyrol injected several times a day may be used advantageously. When there is intense itching, a 2-percent of ichthyol solution containing glycerin should be thrown into the vagina, after first having the vulva and external parts thoroughly washed with the same. After the cavity has been drained, an astringent solution consisting of zinc sulphocarbolate 2 grains to the ounce, should be applied. It is an excellent plan to cover the vulva with pads saturated with a very weak solution of mercury bichloride.

Labarraque's solution, diluted to 1 in 20, may be used to inject during the acute stages; one ounce of chlorine water added to a pint of lukewarm water, morning and night. If discharge is not lessened markedly, injection should be given three times a day.

The arsenates of iron, quinine and strychnine, with nuclein should be given three times daily. Also, the child should be saturated with calcium sulphide. Very remarkable results have been secured recently from the local use of a combination of echinacea, belladonna, and nuclein. A concentrated standard solution is applied to the infected mucosa and the cavities are irrigated with a dilution containing 5 minims to the ounce of water.

Congestion is promptly relieved, the discharge ceases, and in some unexplained manner the field is rendered inimical to the Neisser bacillus.

Strict attention should be paid to hygenic treatment. The patient's hands should be guarded so that the infection can not be carried to the eyes, which is a very common trick among children.

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Real Optimism

IT IS said that in the Cumberland Mountains, when things go wrong and there doesn't seem to be one chance in a million that they will improve, they use this saying, "There's a whole day tomorrer that haint ben teched yet!"

Now, there is what we call the double-distilled, concentrated quintessence of real, philosophical optimism. We confess we have not much sympathy with that cheerful-idiotic optimism which, on the face of it, is inane; that light and airy complacency which utterly fails to take the measure of the enemy's strength and resources. A general of this kind neither inspires his cause with confidence nor gets the most out of his available forces, and as a result he loses both the battle and his shoulder-straps.

By the same token, that sort of silly optimism in a physician spells disaster both to his patient's welfare and to his own reputation. It is easy to be optimistic when one either cannot or will not see the evil. That is a specious, frothy, do-nothing kind of optimism.

But the man who can, and does see the long stretch of hard thorny path between the Now and the Then, yet believes that the Then will ultimately become the Now—his is the optimism which is most likely to do a good share toward clearing the way. The writer sometimes is rash enough to indulge a little in the poetical line—do not be alarmed, he never publishes it in THE CLINIC. A friend to whom once upon a time he gave the "priceless privilege" of seeing some of his effusions asked: "Why is it that you poetry writers are always pessimists? Why do you always write as if everything in the world were wrong?" The reply is, that the man who sees deeply and truly, as a poet is supposed to see, cannot fail to be pessimistic. But, in that pessimism is the truest optimism. The seer sees things all wrong because they are all wrong, and that is the first step to setting them right. But never question that, beyond the today of wrongs and abuses, he sees the "whole day tomorrer that haint ben teched yet."

That is true optimism. He is the true optimist who, seeing all around him nothing but muddle and wreckage and apparent disaster, yet believes that order will come out of the chaos and victory out of the defeat, and works on, fights on, with a song in his heart. He is the true hero who, with the shadow of the cross looming over him, sets his face steadfastly to go to Jerusalem.

Take the lesson in a little more quaint and homely form—for in such matters the homely is often the heroic. Read the following letter—an actual *bona-fide* epistle—it has cheer written all over it.

"Your letter came. Glad you bought a pair of horses. Hilda is sick. She has diphtheria, and she will die, I think. Clare died this eve. She had it, too. We are quarantined. Five of Fisher's family have got it. My wife is sick. She haint got it. If this thing gets worse, we may have to have a doctor. Them trees is budding good. Everything is O.K."

Of course, I am not holding up the detail of this optimist's conduct to emulation. The

rascal ought to have sent for you. But the spirit, my brother, the spirit! That fellow couldn't be a pessimist if he tried. No silly, specious, ostrich-like optimism there, hiding its head in the sand and feeling safe. Positively, there is a Homeric, Jove-like sublimity about it. Clouds—black, angry, threatening clouds—all over the sky, muttering thunder and spitting lightning; and there the fellow sits, with his big shaggy head poked right up through the clouds, and calmly contemplates them, sizes them up, describes them, and sums his epic with the dauntless laconism, "Everything is O.K."

I have seen and heard a great many proverbs and epigrams, all intended to cheer the discouraged soul with the thought that things cannot always be wrong, the sky always dark, the lane always long, and so on; but never one that made quite the appeal to me as this quaint saying of the Cumberland mountaineers. I have cut it out and pasted it in my hat, where it can soak into my brain. I hope it will give my readers as much inspiration as it does me.

No matter how vexatious and criss-crossed and disappointing and dismal and even tragic Today may be, "there's a whole day tomorrer that haint ben teched yet."

It is as impossible for a human being to be happy who is habitually idle as it is for a fine chronometer to be normal when not running.—Orison Swett Marden.

AS TO THE DIAGNOSIS BY THE PATIENT

The one-time pioneer, self-reliant habit has not wholly died out in the present-day American. The time was when he had to be Jack-of-all-trades—tiller of the soil, carpenter, blacksmith, and many other things manual, besides acting as policeman, lawyer, and doctor as well. So it is that we need not feel disgruntled when we find his descendants quite ready with positive conviction upon matters medical. The patient is just as likely to call upon us to treat him for, let us say, rheumatism or dyspepsia as deferentially to request our opinion as to the nature of his trouble.

How much weight is to be given this lay diagnosis?

Sometimes a man really knows what does ail him. He may be subject to a certain malady. His own conscience may tell him exactly what to expect. Indiscretions of many sorts may impart a knowledge that does not come to the doctor except by chance. Many of us have laughed over the tale of the rustic who, when the new doctor diagnosed the inflamed condition of his skin as erysipelas, responded: "Ery—hell! A bee stung me!"

Once, as this writer puzzled over an eruption that appeared on an infant whenever it slept, an old neighbor woman kindly helped the doctor out, by whispering into his ear, "Bugs!" The wife not infrequently supplies the missing link by a single word that tells the whole story—you know the list of them: "poker," "lobster salad," "booze," "lodge meeting" and other such personal factors in the life of the sufferer; who, only too often, had lacked courage to hint as to the real cause of his ailment, although quite well aware of it.

These are by no means instances of lack of diagnostic skill on the part of the physician, but rather evidences of a defect of human nature every last one of us is possessed of—merely, that the real explanation does not happen to occur to us. We know the true explanation, only the cerebral exchange does not connect us with the proper memory-cell. To illustrate:

On one occasion the great Da Costa, during an epidemic of smallpox, called to treat a child, made a diagnosis of variola; however, the next day a very inferior practician saw in it, correctly, a case of measles. The consumate master of diagnosis was being confronted by so many cases of smallpox that he did not think of the possibility of a stray instance of a disease not just then known to be present in that vicinity.

Here is another example: Some years ago D. D. Stewart uncovered in Philadelphia, a widely-spread prevalence of lead-poisoning from chrome-yellow buns. Many other physicians at once recognized this condition among their patients in cases that thus far had puzzled them. Probably every one of these men could have passed a creditable examination on lead poisoning, but the idea of such a possibility had not occurred to them.

So, again, the elder Wood once recognized a case of scurvy in one of his own colleagues of the faculty of the Medical Department of the University of Pennsylvania. Neither the victim nor any of his eminent advisers had thought of scurvy—one word brought realization.

Thus we might go on recalling instance after instance. Sir Astley Cooper opened an abscess and found it an aneurism. Thomas D. Mutter and Samuel D. Gross each operated before their classes on mammary cancers and found abscesses. Many a time the fault

lay in the clever diagnostician looking for the rare conditions and overlooking common, everyday things.

But we are straying from our subject, lay diagnosis. The patient's views should always receive consideration, not as fact, but as evidence—the doctor must be the judge. The "rheumatism" may be anything that hurts—neuralgia, neuritis, myalgia, gout, what not.

There is, for instance, the notable case of an old veteran who had drawn a pension from our Government for twenty years, and more, for what had been diagnosed as rheumatism. The record was clear, beginning before he had been mustered out, and showing that his trouble followed proved exposure capable of inducing rheumatism. This writer's later observation, however, showed the malady to be a slowly ascending myelitis, and of which the patient eventually died. There was no question as to the death resulting from the malady for which he had rightly been pensioned or as to its having been contracted in the line of duty. The death-certificate was made out in accordance with the facts—and thereupon our great and good Government, through the Pension Department, cancelled the pension, on the ground that the man's death was caused by myelitis, and not by rheumatism, as officially recorded. Evidence showing that it was the same disease, the difference being merely as to its proper designation, was ignored.

I am sorry for the doctor who does not give due weight to the patient's views; and still more so for him who does not manifest a knowledge far deeper and more comprehensive. The physician who can accept the lay view, and then so amplify and extend it that the patient, pleased and even elated that he himself has been found right, still feels that the doctor has told him a whole lot more about himself than he himself knew, has firmly established himself in the family's esteem.

"Doctor, the trouble with Joe is that he went to lodge last night, ate a big supper of lobster, beer, and Swiss cheese, and has his digestion all knocked out."

"Yes, Mrs. Joe, but he has the stomach of an ostrich, and would have carried it off had it not been that he has allowed himself to be constipated lately and the poisons, reabsorbed from his colon, have begun to affect his kidneys. He will have Bright's disease unless he reforms his ways and pays attention to himself; and his nightmare last night was really an epileptic fit."

This doctor accepts the family view, but he also takes his place as the expert, with a knowledge far ahead of theirs.

Every doctor should be examined by the state board, to see whether he has a well-developed bump of curiosity. So many interesting things are discovered upon search, that do not appear on the surface. Great as is the laboratory man, he is not a real doctor unless he has a profound knowledge of psychology and a keen interest in the study of man as an individual.

The ideal general practitioner is virile by virtue of his environment; he is self-reliant from his isolation; he is resourceful from necessity; he exalts common sense above fine theories; he deals with all conditions and preserves a breadth of vision; grasps general principles, and failing the finer technical knowledge of the specialist, is spared the distortion of his perspective. He knows the patient as a man and a friend and not as a commodity; and he it is who exemplifies best and most consistently that unselfish regard for others that glorifies medicine.—Meara, in Bost n Medical and Surgical Journal.

AMEBIC DYSENTERY

In the August number of CLINICAL MEDICINE, we printed an article by Dr. J. F. Roemer upon "Emetine in Amebic Dysentery." We have seldom published a paper commanding as much interest as this one has, in connection with the reports, in abstract, from England and France in which it is shown quite conclusively that in emetine hydrochloride we have a specific remedy for this form of chronic dysentery. Many physicians have written us for further information concerning this drug, and we know that a good many are now experimenting with it. We wish to hear from as many of these men as possible after they have tried the remedy in one or more cases.

We, therefore, want to urge all of you to send us full details of your experiences, for publication or not, as you prefer. Tell us about every case in which you used it, giving clinical symptoms, results, laboratory tests if any were made, and the effects produced by the emetine. What dose did you use? Was it injected hypodermatically or given by the mouth? Did improvement follow, and, if so, how soon? Was any collateral treatment employed, and what?

We consider this matter of extreme importance, and we are desirous of securing all possible data. Thus far we have not seen a single unfavorable report of a case of true amebic dysentery in which emetine was tried, and we have seen many reports. The drug,

however, is not curative except in the amebic form of dysentery, although without doubt it does benefit all types of the disease, through its stimulant action upon the hepatic and intestinal secretions.

To submit to life whiningly is not living. Life should be made active and joyous. It is so short that it is a pity to lose even a few moments of it in sadness.—Dr. Paul Dubois.

THE FAITH IN CACTUS AT LAST JUSTIFIED BY LABORATORY PROOF?

The announcement by Professor Groeber—a careful literal translation of which appears among the leading articles in this issue—to the effect that cactus grandiflorus positively contains a glucoside (not yet isolated) with a physiologic action similar to that of the digitalis principles, is bound to arouse keen interest in all those thousands of clinicians whose faith, based upon intelligent bedside observation, could not be shaken by adverse criticism, negative experiences by skeptics, or even ridicule and accusations of credulity. This article cannot but strengthen the confidence in this much-maligned yet valuable medicinal agent of every physician who for himself has tested out its virtues, while it should swell the number of recruits willing to give cactus a fair trial.

That direct laboratory proof of the pharmacologic activity of this drug should have been so long in coming forward, is a strange fact; still, those who have been prescribing cactus intelligently have never doubted that it contained some proximate principle capable of affecting the action of the heart, even though the chemist thus far had not succeeded in proving its existence or pharmacologic experimenters had announced negative results in the case of animals. However—evidence would be forthcoming some day; there was no doubt in the hearts of those men.

While, of course, the testimony of a single reporter—and that based upon relatively so few tests—will not be accepted by all as conclusive, we believe that ultimately there will be ample corroboration of Groeber's results. At all events, with more definite data to hand, the number of those taking up the thread will be large; and by and by we shall hear from them. Meantime, the account speaks for itself.

In passing, attention may be called to the fact that Dr. A. Groeber—the author of the report—is an assistant professor at the University of Berlin, and laboratory assistant to Professor Heffter, the director of the world-famed Pharmacologic Institute at Berlin. Any person who knows the painstaking care of the German laboratory worker, and who is familiar with the traditions and achievements of this great Institute, will not doubt for a moment the reliability of Groeber's report.

Professor Groeber compares cactus with digitalis and finds the remedy possessed of a definite action similar to yet less powerful than that of the second-named remedy, and he stops there. When the typical digitalis-action is desired—the profound stimulation of the heart-muscle and the constriction of the arterial coats so characteristic of this drug—then there is nothing to compare with the foxglove; but every physician who has used cactus and its concentrated preparations knows that it has a place peculiarly its own—that to *steady* the action of a disturbed heart, to give it a gentle *tone*, and to do this without danger of cumulative or other toxic effects, cactus is a remedy that can be depended upon.

Some months ago Professor John Uri Lloyd published in *The American Journal of Pharmacy* the results of an investigation carried on at great expense to determine what plant drugs were most generally used by American physicians. He received more than 10,000 reports, and when these had all been counted and classified he made the remarkable discovery that cactus headed the list! Some 6239 physicians declared it their favorite remedy.

This was no accident—we cannot believe that all these men were mistaken—and we hope and sincerely believe that Groeber's report (which you will, of course, read) will help to clear up the "mystery"—if mystery it be—concerning cactus. *Our* faith in it has never been shaken.

ARE YOU A DOCTOR?

"Do you anticipate large public wants and provide the means to satisfy them?" asks William DeWitt Hyde. "Do you watch progress all over the world and apply methods and devices, which succeed at one point, at similar points elsewhere? Can you make two blades of grass grow where but one grew before? Can you see clearly great undertakings before they are accomplished, calculate cost and profit, fill others with the vision, induce them to share the cost in the hope of the profit, and then make a good thing for them, a better for yourself, and the best of all for the community you improve and serve?

Then you are a captain of industry, a man of enterprise."

Let us, for our good, paraphrase this to the physician's case.

Do you see keenly the physical defects and needs of your patients and your community and furnish the ways and means of remedying them? Like Matthew Arnold's characterization of the Great Physician, do you

Take the suffering human race,
And read each wound—each weakness clear—
And strike your finger on the place,
And say, "Thou ailest here—and here?"

Do you watch medical progress all over the world, and avail yourself of every diagnostic and therapeutic measure that the research and clinical investigators put within your reach? Can you bid death be life and sickness be health? Can you see clearly pathologic and therapeutic processes which are invisible to the eye, pit your skill and your strength against them, inspire your patients with confidence and make them share the enthusiasm and the responsibility of the fight, and turn defeat into victory for yourself and them, and achieve a lasting benefit for the generation which you love and serve? Then you are a great physician, a true doctor.

Oh, believe me, there is a genius of medicine, just as there is a genius of business, and of music, and of art. Without it, the practice of medicine is a dreary, monotonous, often repulsive drudgery, or, what is worse, a sordid money-grubbing trade. With it, our work becomes a sacrament, dedicated to the service of humanity and brotherhood. Let me read you a little from Sir Mitchell Banks' beautiful comment on Luke Fields' equally beautiful picture of "The Doctor."

"The sick child, worn with raging fever, lies spent and exhausted. Till then, the parents have been fighting on, with their nursing, caressing, soothing, encouraging their little one, and hoping against hope seems all that is left to them. And there sits their friend, the gentle doctor, watching with them, and still puzzling his brain to think what more he can devise to stay the lamp of life from flickering out. He is no courtly physician, no specialist, that man, thank God. He is only a doctor. But his rugged face tells of honesty, and common sense, and self-reliance, and gentleness. What more do you want? The men that look like that man, whatever be their business or profession, I say, of such men is the kingdom of heaven."

Don't you and I want to belong to that order? Then it means toil, and sacrifice, and abnegation, and discipline, and alertness, and earnestness, and patience. One buys his initiation into this order, not with money, but with flesh and blood.

The heights by great men reached and kept
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night.

Yes, even the burning of midnight oil. Nowadays, more than ever in the history of medicine; for medicine has become a vast and swiftly moving cortege, with which the laggard will find it impossible to keep step.

The real physician of today is no longer a slinger of pills or a mixer of drafts. He is a seer of visions and a doer of big deeds. He must have the genius of medicine, just as the captain of industry must have the genius of business.

The attorney who defended F. A. Heinze, the "copper king," in his trial for misappropriation of the funds of the Mercantile National Bank, received a check for $800,000 for his services. If a physician had saved his life or that of one of his family, what would have been thought of such a fee?—Medical Council.

OBSOLETE IDEALS

Were I directing a public library instead of proscribing Alger and Optic, I should root out and burn every book for boys devoted to the inculcation of Contentment, Modesty, and Obedience.

Contentment?

I would supply the expanding, absorbing, assimilating mind of Youth with tales of discontent; of men who saw the wrongs of humanity, and burned with the desire to remedy them. Men who felt their own wants, needs, limitations, and were not content to remain passive under them, but who exerted themselves to better their conditions. For what is discontent but the recognition of the possibility of better things and the determination to win them?

How did it profit the many generations of French peasants that their manorial Seigneur possessed the right to open their abdomens and warms his cold feet among their bowels—and that they remained "contented?" The men who rose and exterminated the class who enjoyed such privileges taught the world the greatest lesson it had had in eighteen hundred years.

Discontent is the divine spark that distinguishes man from the brute. Discontent has swept the race along the path leading from the pithecanthropus to the triumphant product of today. Discontent will carry man

forward to the glories of the tomorrow. Hail to the goddess of Discontent, of Endeavor, of Progress.

Modesty?

Here we have the canker of the books to which I object as unfit reading for youth, as well as to the ideals upon which they are built. Modest worth that waits in the background until the lord of the manor recognizes it and bids it come forward and take a seat at his right hand. That necessitates a lord of the manor, a very superior being before whom modesty, and even immodesty, bow in lowly subservience. Immodesty needs no lord, no patron, no helper from outside. Immodesty pushes himself to the front, and stays there; unless some supreme, irresistible influence intervenes to push him back. Immodesty depends on himself, not on favor gained by truckling to superiors. Immodesty is usually designated as assurance or nerve.

A youngster was graduated from medical college and, without waiting for the traditional years of general practice and experience, began at once to do major surgery of the most advanced type. He even specialized on oophorectomy, an operation of which the then surgical colossus of the day had recently said, "I trust that no pupil of mine will ever be guilty of the crime of removing a woman's ovaries."

People said of the young surgeon, "What nerve!" The other doctors said, "The upstart!" His classmates said, "The gall of the man!" and that the man's "nerve," his assurance, "gall," rashness, defiance of precedent, and all that was to place him at the head of the great army of surgeons. Many have followed his example, and now it seems strange that any should object.

Obedience?

Obedience is the virtue of women—and of slaves. It is the virtue of the soldier, in the armies of industry as in those of war; for here efficiency and accomplishment depend upon the welding of the many into one homogeneous mass, a concentration of forces wielded by the will of the one. But obedience brings results won only by the sacrifice of the individuals—and there are limits. Obedience is to meet emergencies, to accomplish great ends, to oppose forces not to be resisted by the individual alone.

But modern war is founded, not on the compact masses of the Macedonian phalanx, but on the skirmish line developed by Sherman's soldiers. Individualism, with mutual concert and support, makes the warrior of today. The boy who acts only upon orders will never be a leader of men. The boy who questions, who stubbornly refuses to do until convinced of the right grows into the man to whom others look for guidance in times of stress and trouble.

Obedience, with assent and comprehension, is good; obedience through compulsion, is slavery.

Of all men, physicians are the most enslaved to tenet, to authority. The nature of their calling and the heavy responsibility makes them so. Innovation gets to seem to them a crime. Should a patient die, if the "most approved treatment" and the highest authority have been followed, one may be philosophic and pass it by with the thought that "all men must die."

Let a radical, revolutionary improvement, like the alkaloidal method, be introduced, and, as it becomes firmly established, the innovation in time is forgiven; but the innovator never.

There is an old therapeutic epigram which is worth remembering: "Frapper fort et frapper vite"—strike strongly and strike quickly. It is a worthy companion to "Small doses frequently repeated to effect."

ALL A DOCTOR—OR HALF A DOCTOR?

One of the most conspicuous features of the International Congress of Hygiene held last fall in Washington (it is a little late to be drawing lessons from this event—but never mind) was the success that was reported in the department devoted to infectious diseases. And, in contemplating the matter, it seems to me still more significant that this unprecedented success is owing to the fact that the medical and hygienic sciences are now combatting these diseases at every assailable point.

In the first place, science is attacking the germs themselves, in their habitats and in their channels of communication. It is tracking these pathogenic organisms to their lairs and carrying the fight into the very sources of their generation and multiplication. Then it is following up the ways and agencies by which they find their way into the human system, and is engaged in effectively blocking their path. And, lastly, recognizing the fallibility of these other methods, science, by an artificial immunizing of the system, is preparing the human body against possible invasion of various germs. So, with these enemies of human life, as with the enemies of ancient Israel, "him that escapeth the

sword of Hazael shall Jehu slay, and him that escapeth the sword of Jehu shall Elisha slay."

There is, I think, an excellent lesson here for therapeutics and for the therapeutists in general. In our zeal for this and that particular modern method of treatment, we are, perhaps, a little prone to rely too exclusively upon that one measure, to the neglect of all others. In other words, we are prone to allow the newer therapeutic modes and agencies to supersede those which we already had, instead of reinforcing them. So, for example, in those very diseases of which I have just spoken, the infectious diseases, because science has put into our hands the serums and bacterins (which are most welcome and powerful weapons—there is not the least idea of belittling them), there is, I think, a certain disposition to rely upon them altogether, and to discard the older drug and physiologic treatment that we used to employ.

That is neither wise nor rational. The wise financier does not put all his eggs into one basket. The wise general does not throw all his attacking or defending forces into one trench. The former distributes his investments—"supports his market," in technical terms—so that the net result of his activities may be a safe and profitable return. The latter fortifies every possible and probable avenue of attack and defense, so that he may not be surprised at any point, and to insure the most effective work being accomplished by his *piece de resistance*.

By the same token, the wise physician will not stake his entire hope of success upon one single therapeutic measure, for he knows, or ought to know, that all the processes of nature are complex. No disease rests upon a single, simple morbid entity that can be met with a single, simple therapeutic measure. On the contrary, every disease ramifies into practically every phase and function of the organism, and needs to be combatted from every available angle.

Consider, once again, the infectious diseases. Assume that a specific bacterin is at hand for a given infection. This bacterin stimulates the opsonic activity of the blood, but, if there be not an adequate supply of leukocytes and of nuclein elements, the opsonic stimulation will fall short of its effect.

Hence, the wise physician, in conjunction with his bacterin treatment, will strive to raise the blood-index by the administration of nucleins, and in chronic cases will use the arsenates also.

Again, in localized infections (and the majority of infections are localized), it is necessary, in order to get the full benefit of blood defenses, to insure the focus of the invasion thoroughly and continuously being supplied with vital, circulating blood. Therefore, the wise physician will reinforce his bacterins and his nucleins with circulatory equalizers and vasodilators which will mobilize his defensive forces to the point where they are needed.

And last, but not least, one cannot expect to do effective work, either offensive or defensive, where the debris of battle is permitted to accumulate, choking the avenues of advance and poisoning the air. And, so, the far-seeing therapeutist will take care that during the conflict with microorganisms the intestinal canal is "cleaned out, cleaned up, and kept clean."

All of which is simply illustrative detail, designed to point the moral and exemplify the principle. New progress in medicine does not repeal and invalidate all that has gone before. It adds to and illumines it. Because new fresh troops are sent to our aid, we should not for that reason muster out those that we have, those which have proven their mettle in hard-won battles. Rather, the reinforcements enable us to use our old forces to much better and more intelligent advantage; and with both the old and the new we should find ourselves able the more thoroughly to guard and attack every point of our own and of the enemy's line.

Science sans expérience
N'apporte pas grand assurance.
—Ambroise Paré.

THE N.A.R.D. AND THE NATIONAL ANTINARCOTIC LAW

The delegates to the meeting of the National Association of Retail Druggists devoted a very large share of the time during their last convention—held in Cincinnati August 25 to 29—to the discussion of the Harrison Antinarcotic Bill (H. B. 6282) recently passed by the House of Representatives and now pending in the United States Senate. This bill, as already stated in these pages, was drafted by the National Drug Trades Conference, consisting of fifteen delegates, three from each of five different associations representing the drug trade in all its branches.

The retail druggists were represented by six delegates, three each from the American Pharmaceutical Association and from the

National Association of Retail Druggists. It was generally supposed that the conference bill had been unanimously endorsed by all these delegates, but it seems that one representative of the N. A. R. D., Mr. Frank H. Freericks, the general counsel of the latter association, was opposed to it, principally on the ground that, in his opinion, it was too favorable to dispensing physicians.

In other words, of the fifteen men who framed this bill, fourteen were in favor of it and endorsed it without open qualification. One man opposed it. However, this one man happens to be a person of considerable influence, an able speaker, and of remarkably magnetic personality. It was Mr. Freericks who led the fight against the endorsement of the Harrison Bill at the meeting of the N. A. R. D. He opposed the adoption of the report of the Committee on National Legislation and made a minority report, which, after a discussion extending over two days and a considerable portion of one night, was finally adopted by the delegates of the N. A. R. D. by a vote of practically two to one.

While Mr. Freericks and his associates opposed the Harrison Bill upon a number of grounds, their principal objection to it—the one which overshadowed all others—was the failure of the bill to place heavy burdens upon dispensing physicians.

The N. A. R. D. is frankly anxious to secure legislation that will make it difficult or perilous for physicians to carry and dispense their own drugs. The kind of antinarcotic bill which Mr. Freericks desires is one which will make it practically impossible for physicians to dispense this important class of emergency-remedies. Apparently he wishes it to be so framed that no physician will feel safe in administering opium, coca, and their alkaloids, except by writing prescriptions for them; thereby compelling every doctor to patronize the druggist, regardless of his own interests and equally regardless of the welfare of his patients, as he sees it.

Several objections made by Mr. Freericks and his associates, and embodied in the minority report, are as follows:

1. According to the Harrison Antinarcotic Bill, the pharmacist will be compelled to preserve for a period of two years all prescriptions calling for these narcotic drugs. The physician, on the other hand, will not be compelled to keep a record of "sales." However, like every person registered under the act, he will be required to keep a record, on an official order blank furnished by the government, of all purchases of these drugs or their compounds or combinations. If he uses these drugs in unusual or improper quantities, he can—and probably will—be "spotted" quickly.

2. Mr. Freericks would like to exempt from the operations of the act all physicians who do not dispense their own medicines—in other words, secure legal discrimination against one class of doctors, i. e., the dispensers. He neglects to call attention to the well-known fact that practically every physician in the United States does dispense narcotic drugs every time he uses a hypodermic syringe, puts a drop of cocaine in the eye or gives a dose of codeine or a minute quantity of morphine to relieve pain of any character; he is "dispensing" just as much as the doctor who carries a full line of drugs for all conditions which he may be called upon to treat.

3. He is afraid that the two-thousand-dollar fine and five-years' imprisonment provided for the violation of the act may get the druggist into difficulties, because the latter has no way of knowing positively just what physicians are or are not licensed under the act to prescribe these drugs. Yet it should be easy enough for each druggist to learn whether the physicians in his own community are registered or not.

4. He believes that the bill is unconstitutional, since it interferes with the exercise of the police-power of the states. On the other hand, no such objection has been raised by the constitutional lawyers in Congress; and other attorneys, not less learned than Mr. Freericks, fail to see the force of this argument.

5. He objects, finally, because it permits distribution direct to consumers of preparations containing minimum quantities of narcotics—a legitimate objection, which was really a concession to the proprietary interests and to the druggists themselves. At the National Drug Conference, Mr. Freericks did not press this point—or, if he did, we did not hear him.

It is practically impossible to mention here, even in abstract, all the arguments brought forward either in support of or against the Harrison Bill at this meeting. However, again and again the speakers made it plain that the central intent, the real purpose behind all this opposition, as well as behind all the legislation (both state and national) proposed by this association designed to control

the sale of drugs, was, as one speaker put it, to "get the dispensing doctor."

The abatement of the great narcotic evil seemed to be of far less importance in the minds of the objectors than the enactment of a law that would be, primarily, of financial interest to the retail druggist. Mr. Freericks, in his able argument, made the statement that he would much prefer an indefinite postponement of this national legislation unless a bill such as he desired, and such as he advocated, could be passed.

The spirit of the meeting was well epitomized by the president of the N. A. R. D., Mr. Henry W. Merritt, who, in his address, under the subtitle "The Dispensing Doctor Unsafe," spoke as follows:

> The number of physicians who dispense their own medicines continues to increase. Pharmacy is fast becoming a lost art in all but the larger cities, and even there the evil is growing apace. Medical dispensing is prohibited by law in Germany, Austria, and all other continental nations, on the ground that it is not only a menace to public health but to public safety as well—that it is both unwise and unsafe to vest in one man the right to diagnose, to prescribe, to dispense the remedy, to administer it, and then, if death ensues, as the result perhaps of ignorance or carelessness or even of criminal intent, to write the death-certificate, thus burying with the patient all evidence of the crime.
>
> But this is not all. Though by far the greater proportion of all medicines dispensed nowadays is by the doctors themselves, and, though *it is a notorious fact that perhaps a majority of them dispense medicines of the cheapest and poorest quality*, for which pharmacists and manufacturers would suffer heavy penalties under federal and state laws, these medical men may nevertheless snap their fingers at all pure-drug legislation and dispense whatever they please with entire impunity. Is this right? Is this discrimination against competent pharmacists and in favor of pharmaceutically incompetent physicians right? Is it consistent in doctors to rage against impure and secret medicines and to demand punitive legislation and themselves be guilty of the offense in the worst form, only to assert their right, not only to immunity from punishment, but to exemption also from any sort of inquiry into their acts?
>
> The better class of physicians deplore existing conditions which they assert are mainly due to medical competition. One dispensing doctor can drive the physicians of a whole community into the practice. Relief from the burden can be secured only through legislation, and in this reform pharmacists may count on the support of all physicians who put the welfare of their patients above the promptings of dollars tainted with insincerity, inconsistency, and a degrading commercialism.
>
> The remedy is not in direct prohibition, perhaps, as this would doubtless be found extremely difficult of application; but, in providing, first, that the physicians who choose to be their own pharmacists shall furnish their patients with prescriptions for all remedies supplied just as they would if the prescriptions were to be dispensed by licensed pharmacists; and, second, in cases of fatal termination, the local health-officer, and not the dispensing physician, shall certify the cause of the death.

We present this matter, not because we have any antagonism toward or unfriendliness for the retail druggist, for we have not. Indeed, the average retail druggist we believe is an honest, capable man, desirous of giving his patrons good service and good drugs; but we also consider it our duty to present to the medical profession the exact situation.

That there is a considerable number of men of influence among the druggists who are trying with all their power to secure repressive legislation against the medical profession, legislation which is primarily intended to benefit themselves at the expense of others, and not first of all for the welfare of the people, is perfectly apparent. This fight in the N. A. R. D. over the Harrison Bill indicates clearly that this is the case.

Now, that Mr. Freericks has won out with his minority report, we may expect that a determined assault will be made upon Congress by this Association, to secure the amendment of the Harrison Bill in such a way that the greatest possible injury may be done to the dispensing physician.

From a legislative point of view, the N. A. R. D. is most carefully organized. It has its branch-workers in every state; it is closely in touch with our legislators and there is no doubt it is determined to bring all the influence it can to secure its ends by legislative means. Unfortunately the medical profession is not so organized. Almost none of its societies has interested itself in the question of legislation, and whatever is accomplished by physicians must be accomplished individually rather than collectively.

Therefore, we most earnestly urge that every physician who desires to maintain his independence and his right to practice medicine freely and without interference should make his wants known regarding the Harrison Bill, and write immediately to his United States Senators, urging its passage exactly as it stands.

There is nothing in this bill, as Mr. Freericks has so strenuously endeavored to show, which permits the physician to "peddle" narcotic drugs. On the contrary, the excessive use of these drugs in a man's practice, once this bill becomes a law, can readily be detected by the federal inspector; and if he goes astray he will be liable to prosecution and punishment by the state and federal authorities.

We ask no exemption for the doctor for wrongdoing; he should be punished like other men; but we do demand that, in the practice

of his calling, in the relief of pain and the amelioration of suffering of all kinds, he should be hampered as little as possible. That is all the doctor asks or ever has asked.

One word more: The physicians of this country, whether they dispense or whether they prescribe, resent the oft-repeated accusation made by a few retail druggists—and, so far as we know, by retail druggists only—that "a majority of them dispense medicines of the cheapest and poorest quality."

This statement is absolutely untrue. The practicing physician is more interested in securing good drugs than is any other man; and the sinister suggestion, that he uses poor stuff, while the druggist in his town handles good drugs, and good drugs only, will not serve to bring physicians and druggists closer together—a consummation which is greatly to be desired and which can be brought about only by the recognition on both sides of the essential integrity, ability, and rightmindedness of both parties.

In the opinion of this writer, those of our druggist friends who are so strenuously demanding the enactment of laws intended to put the dispensing doctor out of business are doing more toward driving the doctors away from their stores than anybody or anything else.

Again we urge every reader of CLINICAL MEDICINE to use all the power in his possession, all the influence he can command, to secure the passage, unamended, by the United States Senate, of House Bill 6282. This bill will do more to abate the narcotic evil than anything heretofore suggested. It is a good bill and should command the support of every physician. Act, and act quickly!

Life is made up not of great sacrifices or duties, but of little things, in which smiles and kindnesses and small obligations, given habitually, are what win and preserve the heart, and secure comfort.—Sir Humphrey Davy.

ARE YOU AFRAID?

The Byzantine Greco-Romans disputed as to how many angels could dance on the point of a needle when the Turks were assaulting the walls of their city. In the "Battle of the Books," its author held up to derision the rash innovator who thought that the moderns could possibly produce any literature worthy of being ranged by the side of the classics.

Today is practical. It busies itself with the myriad problems pressing for immediate solution, and has no time nor energy to consider what other men thought, believed or did at other periods of the world's history. Today is thoroughly in harmony with the youth who, reproached that he did not even know who the Romans were, indignantly responded that he read his Bible as much as anybody in the house! Only, that Today doesn't read its Bible. The dailies are all the reading Today finds time to do, and it takes a stretch to include the Sunday edition, even though no individual peruses more than a selection from it.

Has anybody time for abstract reasoning? Has anybody else time to read the results of abstract reasoning? Hardly; and, yet, there is nothing so practical, so useful, so essential to the busy man of today as some abstract thought.

Take this little duodecimo of 128 pages by Stanley Le Fevre Krebs—"Twin Demons, or The Four-Headed Dragons." He discusses the psychology of fear.

Does that affect you?

Reader, I do not know whether you are man or woman, educated or illiterate, layman or doctor; but I venture to assert that there is not any one thing that interests you personally so much or so practically in its bearing on your life, your work, your success in the world.

Are you afraid? Of what? How?

Krebs discusses the nature of fear, its causes, its curse; devotes 22 pages to its cure; then has a word about worry.

Fear is the result of four causes—physical, ethical, mental, and spiritual. Physical: eat a lobster supper—and note your dreams. Ethical: "one can not be happy as long as he is [he feels himself] guilty." Mental: "ignorance is the prolific mother of a swarming brood of immeasurable fears." Spiritual: "lack of faith, loss of trust, in God."

Don't worry—he is not preaching. "A truly intelligent man trusts God. Credulity and superstition are evidences of a childish faith, badges of ignorance, breeders of all sorts of fears and harassments, senseless ceremonies and cruel sacrifices."

The effects exerted by fear upon the bodily functions are touched upon, graphically but not exhaustively—just enough.

The Cure: "No man is respectable who is not doing his best." "Take care of your health." "You can control or check an oncoming fit of fear by deep breathing." Use the erect posture habitually. Several methods are given in detail—very interesting:

"It is worrying over the loss of sleep rather than the loss itself that makes thousands of people miserable." "Do your duty." "Culti-

vate the spirit of love." "Assert the law of ignorance." "Wait." "Fear and worry are a weak habit of thought." "Reason your fears up by the roots." "The Bible is the invaluable record of the development of the God-consciousness of a particular people." Dean Hodges says: "St. Martha is the patron-saint of American women and St. Vitus of American men." "Worry is a twin-demon, a sister dragon with four heads." Worry kills. It beclouds judgment.

"Don't worry—but work;
Don't fear—but follow;
Don't pine—but pray;
Don't trouble—but trust."

ANTITYPHOID VACCINATION IN THE ARMY

During the first five months of the year 1913, not a single case of typhoid fever occurred in the United States Army; indeed, the last case (according to Major Frederick F. Russell, in a paper read at the last annual meeting of the American Medical Association in June) was one reported on December 19, 1912, and this occurred in a man who had not been vaccinated against the disease. This probably is the most remarkable record ever made in this or any other army, and is conclusive testimony as to the prophylactic value of antityphoid vaccination.

Voluntary vaccination against typhoid fever was begun in the Army in 1909; 830 men being vaccinated during that year, when there were 173 cases, and 16 deaths. In 1910, 16,093 men were immunized, and there were 129 cases, and 9 deaths. In March, 1911, vaccination was made compulsory in the maneuver-division in Texas, and approximately 20,000 men assembled along the Mexican border were subjected to the treatment. In June of the same year, this method of immunization was extended to recruits, and since then all men entering the service have been given an initial injection of typhoid vaccine on the first day of service, in addition to the vaccination against smallpox. In the last quarter of 1911, antityphoid vaccination of all persons in military service under forty-five years of age was made compulsory. During this year (1911), there occurred in the Army 44 cases of typhoid fever and 6 deaths.

In 1912, this method of prevention being now compulsory upon practically every man in the Army, the number of cases among the 58,119 men serving in the United States fell to 15, and there were but 2 deaths. In the entire Army, at home and abroad, including officers and enlisted men, 88,478 in all, there were 27 cases of typhoid fever, and 4 deaths. It should be added, however, that of the 27 who contracted typhoid fever, only 8 had actually been vaccinated, and of these none died.

The practical result, given in detail, is, that since the method of vaccination against typhoid fever has been made compulsory in the United States Army not a single vaccinated soldier has died of that disease.

Can there be more conclusive evidence of the value of this method of preventing typhoid fever than this? While we know that modern methods of sanitation, especially as applied to camp-life, have aided greatly in the reduction of the extent of this disease, we may add that typhoid-immunization has now removed absolutely every reason for any person being attacked by that disease. And more than that, this method of treatment is free from danger. Says Major Russell:

"During the past four years, over 200,000 persons, mostly in the military or naval services, have been immunized without any fatalities or untoward results. There have been no reports of cases indicating that the vaccination has activated latent tuberculosis or any other disease; in fact, as regards tuberculosis, there has actually been a diminution in the number of cases of all classes of tuberculosis during this period."

Major Russell closes his paper with the following pertinent statement: "It [typhoid vaccination] will certainly be as efficacious in civil life as in the Army, and its more general use will hasten the time when typhoid fever will become a neglible factor in our public-health problems."

He or she that is idle, be they of what condition they will, never so rich, so well allied, fortunate, happy, let them have all things in abundance and felicity that heart can wish and desire, all contentment—so long as he or she or they are idle, they shall never be pleased, never well in body or mind, but weary still, sickly still, vexed still, loathing still, weeping, sighing, grieving, suspecting, offended with the world, with every object, wishing themselves gone or dead, or else carried away with some foolish phantasy or other.—Burton's "Anatomy of Melancholy."

WHAT IS RHEUMATISM?

With what startling rapidity fashions do change! It doesn't seem so very long ago that every woman wore crinoline, and did her hair up in curl-papers. Then came bustles, then "Mother Hubbards," then puffed sleeves, then no sleeves at all, and now, finally, we have the slit skirt and the diaphanous gown. What next?

Hypotheses change in medicine almost as frequently as do styles in dress. Take rheumatism, for instance. Pick up the text-book on medicine you studied when you were in college, and you will find a grave discussion of the lactic-acid theory, with the correlated advice to adopt the alkaline plan of medication. Hardly were you embarked in practice, before Haig presented his fascinating uric-acid hypothesis, which veritably swept you off your feet. It was so rational, so plausible, that it won instant acceptance by ninety percent of the profession. But the other ten percent doubted—and in another decade these had their innings.

By this time, the bacterial tide was on. The germ was everywhere and everything, and Poynton and Paine's discovery that a streptococcus was present in many rheumatic joints served to fortify the opinions of the growing class who believed that "rheumatism" was caused by a specific microorganism. But the flaw in the chain of reasoning was the fact that clinically the disease presented itself of different types. For instance, gonorrheal arthritis was known to be connected in some way with gonorrheal urethritis, while the more chronic forms of arthritis did not fit into the accepted scheme of rheumatism—arthritis deformans, for instance.

The latest conception of rheumatism is probably that expressed by Ely in *The Journal of the American Medical Association*; namely, that every case of rheumatism is caused, somehow, by microorganisms, and that every chronic arthritis, particularly, is the result of a focal infection at some point more or less remote in the body of the patient.

"Every one of these cases," writes Ely, "furnishes a field for patient study, and the more thorough the study is, the more frequently a focus of infection will be found in some other lymphoid tissue of the body—a diseased tonsil, appendix, lymph-follicle or lymph-node. A suppurating tooth-socket, nasal sinus or ear may be responsible, or a chronic intestinal infection, according to some authorities." And, as he explains further, almost any germ may be responsible—the clinical effects, in any event, are almost identical.

English physicians have been following this lead more studiously and more energetically than have American members of the profession; and we have been interested to observe how often their researches have led them back to that *fons et origo mali*, the alimentary canal. The tonsil probably is accused more often of being responsible for evil than any other bit of tissue in the body—meaning an *infected* tonsil, of course. Now, however, we are told that disease of the tooth-socket—pyorrhea—fosters rheumatoid arthritis, while English bacteriologists are working diligently on the intestinal flora, which swarms with streptococci and contains numerous other germs, one of which, a "staphyloid" organism, seems associated with the disease in many instances.

The proof of the hypothesis resembles somewhat the "proof of the pudding"—it's in the treatment. The first, and essential thing is, to remove the cause, when this is possible. If there is an unsound tonsil, out with it; if there is pyorrhea, then attend to the offending teeth, extracting or treating locally, as may be required; the advice to "clean out and clean up" the intestine covers all indicated treatment to this portion of the alimentary tract. Abscess cavities are to be emptied and drained wherever found.

In addition to this etiologic treatment, we now have bacteriotherapy. Excellent results are being reported from the use of autogenous and stock bacterins. For instance, we know of a number of instances of acute rheumatism where the acute symptoms subsided rapidly after the injection of streptococcus and mixed bacterins; while even arthritis deformas has been cured, apparently, by vaccination with dead bacteria secured from a focal point of infection.

Such vaccination is worthy certainly of trial in every one of these cases, and many times cures may be expected; although we cannot hope to restore function to joints the articulating surfaces of which have been destroyed or which have become ankylosed.

Does this new conception of rheumatism (as being the expression in a joint of a bacterial infection beginning elsewhere) mean that we should give up the older drugs, the salicylates, the alkalis, the eliminants, the heart tonics, and all the rest? By no means. These *drugs* have been tried and found good on many a hard-fought battle-field with this chameleon-tinted disease. They meet conditions, some of which may be incidental but other of which undoubtedly are etiologic, and they are here to stay.

The new hypothesis is what is on trial. It promises much to answer the question, What is rheumatism? and we have considerable faith in its ability to do so, because it is "proving out" in practice. But—another and better hypothesis may be here tomorrow. Who knows?

Leading Articles

Diabetes Mellitus

What It Is and How to Treat It

By W. C. WOLVERTON, M. D., Linton, North Dakota

EDITORIAL NOTE.—Within the last few years, thanks largely to the genius of Professor Carl von Noorden, we have learned much concerning the etiology and pathogenesis of diabetes mellitus, and this knowledge has given us new ground to stand upon in treating the disease. This newer knowledge is given concisely and in a most interesting form by Dr. Wolverton. ***He will continue this topic next month, with a discussion of the treatment.***

FROM time immemorial, the subject of diabetes, especially as regards its etiology and pathology, has been shrouded in mystery; and it is only recently that much light has been thrown upon this dark subject. We, as physicians, naturally are most concerned with the rational treatment of this condition; but, in the light of recent discoveries as to the nature of diabetes, it would seem foolish to plunge at once into the treatment of this condition, without first considering briefly what is known of the real factors involved in the production of diabetes.

It is safe to say that the idea about diabetes entertained by the majority of the medical profession at the present time could be summed up by saying, that it is a disease characterized by glycosuria as the predominating symptom; by a tendency to the development of certain complications, such as furuncles, carbuncles, and gangrene of the extremities; that the pancreas is in some way responsible for diabetes; that the disease is incurable, ending in coma and death; and, as regards treatment, that carbohydrates should indiscriminately be cut out of the diet.

It is with the hope of correcting the erroneous ideas commonly held by the rank and file of the profession concerning diabetes and its treatment that this paper is undertaken. For the light shed upon this formerly little-understood disease-entity, we are especially indebted to Prof. Carl von Noorden; and it is from his latest work upon the subject that I have largely drawn my ideas concerning the theory of diabetes.

Sources of Sugar (Glucose)—First, Carbohydrates

1. All pure *carbohydrates* and the chemically related substances present in human food play an important part as sources of sugar (glucose). It is very probable that in healthy men living under the usual conditions of nutrition, nearly all the absorbed carbohydrates reappear in the liver as deposits of glycogen, and that only slight traces immediately pass through the liver and reach the general circulation. The latter condition occurs in healthy men only when excessive quantities of sugar are ingested and after absorption make too great demands upon rapid assimilation and fixation (as glycogen) by the liver; the subsequent overflooding of the blood stream with glucose (hyperglycemia) being a step toward the condition termed "alimentary glycosuria."

With the diabetic patient, however, it is an entirely different matter. One of the most important phases of the disturbance of his metabolism is the fact that the hepatic cells are unable to fix the carbohydrates; that is, to store it up as glycogen. The disturbance probably does not consist in any inability to convert the glucose into glycogen, but is owing to a tendency to decompose the newly formed glycogen too rapidly, resulting in a flooding of the blood with glucose. As the diabetes progresses, this decomposition ex-

tends more rapidly and completely, and in the same degree increases the danger of hyperglycemia (excess of glucose in the blood) and of glycosuria.

The carbohydrates, therefore, constitute a source of sugar for the diabetic as for the healthy individual; but the tissues of the former have lost the power of storing the materials in depots (as glycogen) and taking them out of store (as glucose) as demands arise.

Protein as a Source of Sugar

2. *Proteins* also yield sugar, and it is quite clear that the majority of proteins contain a carbohydrate group, which is split off by the action of pepsin and hydrochloric acid and in due course of time reaches the liver through the portal vein. It is a quite remarkable fact that some proteins which contain very little carbohydrate, such as muscle-albumin and casein, act as marked excitants of sugar production; while, on the other hand, egg-albumin, which is particularly rich in carbohydrate, does not especially affect the formation of sugar.

About 40 percent of the total protein molecule, according to Graham Lusk, consists of the amino-acid group. If a diabetic patient or a depancreatized dog be fed upon amino-acids, the glycosuria increases. Although there is at present no certainty that the amino-acids are definite and direct sources of sugar, the same result is bound to follow as if they were, if these substances in ever the same proportion incite the formation of sugar, although they themselves are not the material from which the sugar is built up.

Extraordinary differences in toleration of vegetable and animal proteins are exhibited by diabetic patients. If in a severe diabetes a dietary which is poor in carbohydrates and of low albumin content is followed, and which suffices to exclude glycosuria; and if to this dietary we then add 80 or 100 Grams of glidin (Klopfer), a purely vegetable albumin, the urine remains free from glucose, or nearly so. But, if instead of the glidin we add a similar quantity of meat-albumin, then a marked glycosuria appears, and persists even after the animal albumin ceases to be administered.

Of the proteins (albuminous substances), meat is dealt with least well of all (i. e., under its ingestion the glycosuria increases to the greatest extent); next comes casein; then follows egg-albumin; finally, there is vegetable albumin, and of this type glidin gives the best results.

Fish constitute a form of albuminous food that has long been recognized as being peculiarly useful to diabetics. But oysters must be avoided, on account of the high glycogen content of the liver.

Concerning proteins in general in diabetes, we may safely say that the proportion of the formation of sugar from albumin is not the dominant feature, but that certain protein substances, namely, certain peptids or polypeptids, act upon the liver as powerful inciters to the formation of sugar.

Fats as a Source of Sugar

3. *Fats* form a third source of sugar. The elaboration of sugar from fat by the liver may be termed a facultative process. It seems probable that, when its glycogen content is too abundant, it builds up fat and that this fat is carried to the fat stores. On the other hand, the poverty of the liver-cells in glycogen may indicate the time for the beginning of the manufacture of sugar from fat. Then will follow a vigorous retransport of fat from the fat-depots to the liver-cells (the "sugar-factory" of von Noorden). This has been demonstrated experimentally in phloridzinized dogs, and may be seen clinically in cases of severe diabetes.

According to von Noorden, the muscle-cells can not effect a direct oxidation of fats; the stored-up fat must first be returned to the liver, the cells of which elaborate the fat into sugar, which is then carried to the muscle-cells; where the sugar is oxidized, with the production of energy and heat. It seems probable that glycogen is not formed during the manufacture of sugar from fat. The normal healthy liver forms carbohydrates (sugar; i. e., glucose) from hydrocarbons (fats) only when it is necessary to do so in order to maintain the normal sugar content of the blood and supply the needs of the tissues.

It is probable that certain parts of the fatty-acid molecule may be amidized before they are further broken down. There now seems little doubt that acetone bodies occur during normal intermediate metabolism, but most probably in limited quantities only. Under ordinary conditions, they are at once further decomposed.

Now, under all conditions in which acetone, diacetic and betaoxybutyric acids appear in the blood and urine, glycogen is always entirely absent, or nearly so, from the liver-cells. From all of which it appears reasonably clear that the presence of glycogen in the hepatic cells hinders the formation of acetone bodies or hastens their further decomposition.

This makes plain the occurrence of acetonuria and acidosis in diabetics, whose liver-cells have lost their power of glycogen fixation (or the storing up of glycogen).

The Theory of Sugar-Metabolism in Brief

The control of sugar formation is resident in the liver, and its distribution takes place from this all important organ. Other organs elaborate and consume sugar, but do not share in its production, it being left to the liver to supply the organism in general with sugar.

Summing up what has already been said concerning the sources of sugar, we may state in brief that the following processes occur in the liver:

1. The arrest of carbohydrates absorbed from the intestinal canal, flowing in through the portal vein.

2. The conversion of these carbohydrates into glycogen (animal starch), and quite likely into fat when there is a great excess.

3. When the supply of carbohydrates reaching the liver is unusually large, or when its absorption from the intestinal canal is very rapid, the glycogenic function of the liver is temporarily embarrassed, and a portion of the absorbed carbohydrates escape conversion into glycogen and enter the general circulation as glucose. This leads first to hyperglycemia, and eventually to "alimentary glycosuria."

4. Intrahepatic breaking down of the protein molecule leads to a certain amount of sugar formation; but the details of this chemistry are obscure. It is quite probable that proteins are of more importance as incitants to sugar formation than as an actual source of sugar.

5. If the carbohydrates and, in emergencies, the protein nuclei, are insufficient to supply the required amount of sugar, the latter is formed from fats.

6. The liver possesses a diastatic power by which the stored-up glycogen is reconverted into glucose. This glucose leaves the liver through the portal vein.

While, as we have shown, the sugar (glucose) metabolized (used up, oxidized) by the body-tissues (especially the muscle-cells) is derived from all three classes of food-materials (carbohydrates, proteins, and fats), the formation of sugar by the hepatic cells may be regarded as a single process, which has for its object the maintenance of the sugar content of the blood at a nearly constant level and the supplying of sugar to the tissues.

The amount of sugar metabolized (oxidized or burned) by the tissues varies widely under changing conditions and requirements, but the percentage of glucose in the blood remains remarkably constant; showing the regulating power of the liver.

The normal sugar content of the blood is about 0.07 to 0.09 percent. As the result of prolonged severe muscular exertion, the percentage falls only a little, to about 0.06 to 0.05 percent; here, the sugar is used up so rapidly that production cannot keep pace with consumption. In the normal individual, sugar equilibrium is soon regained when rest is obtained.

We do not know the nature of the signal which informs the liver of the tissues' need of sugar. Possibly it is the lowered amount of sugar in the hepatic artery; or it may be the chemical products of the catabolism of sugar in the cells of muscles and glands; these katabolic products acting as hormones upon the hepatic cells, stimulating the latter to increased production of sugar.

There is evidence to indicate that the "signaling" process is a very complicated one; that is to say, the signals are not transmitted directly to the liver, but first pass through the pancreas or suprarenal bodies, both of which, through their internal secretions, exert a powerful influence upon the sugar production of the liver.

Whatever path these stimuli to sugar formation may take, we may be assured that normally they originate *in the tissues;* which is to say, that it is the requirements of the tissues which form the dominant factor in regulating the amount of sugar production.

The excitability of the sugar-producing mechanism is not uniformly great, and is in only small degree dependent upon the condition of the liver itself. The liver may be the seat of severe pathologic conditions, without the appearance of glycosuria, or even of hyperglycemia. It is only in cases of the most profound degenerative changes in the hepatic parenchyma, such as in acute yellow atrophy and in phosphorus poisoning, that glycosuria appears as a direct result of the hepatic disease.

The really important influences upon the production of sugar by the liver are those of other organs, namely, the pancreas, suprarenals, and, to a less degree, the thyroid and parathyroid bodies, the pituitary body (the ductless glands, all having an internal secretion), and the sympathetic nervous system.

The Ductless Glands and Sugar-formation

The *pancreas* acts as a brake upon the sugar-producing mechanism, its inhibitory

action being due to the internal secretion elaborated by those peculiar collections of pancreatic cells known as the "islands of Langerhans."

When the islands of Langerhans are atrophied or destroyed by pathologic processes, the inhibitory action of the pancreas upon the sugar mechanism is removed and the excitability of the hepatic cells is enormously increased; the control no longer exists which formerly preserved the equilibrium between sugar production and sugar requirements. More sugar is produced by the liver than is required by the tissues; the blood is flooded with glucose, and this exceedingly valuable source of energy escapes unchecked in the urine. The liver no longer has the power to store up glycogen, and the flood of carbohydrates pouring in from the portal vein is passed on into the general circulation without the intermediate change into glycogen and back again to glucose as occasion may require.

In experimental diabetes in dogs and in severe diabetes in men, the liver contains no glycogen, for the reason just stated; that is, the absence of the inhibitory action of the internal secretion of the pancreas.

The *suprarenal bodies* are a second factor of importance in regulating the excitability of the sugar-mechanism.

The influence of adrenalin, the internal secretion of the suprarenal glands, is directly opposed to that of the pancreas, being one of stimulation. Adrenalin causes a rapid expulsion of glycogen from the liver; the blood is flooded with sugar, and glycosuria results. After extirpation of the suprarenal glands, the proportion of sugar in the blood falls markedly—to 0.05 percent or lower. This is also true in Addison's disease (a disease affecting the suprarenal glands primarily).

When the inhibitory action of the pancreas fails, as in severe diabetes, the liver is especially susceptible to stimulation by adrenalin. Quite small doses, which would be without appreciable effect upon healthy persons, send up the sugar excretion of the diabetic by leaps and bounds.

The suprarenal bodies are under the direct control of the sympathetic nervous system. Stimulation of the sympathetic causes an increased output of adrenalin, and this in turn stimulates the hepatic cells to increased sugar production. It naturally follows that in disease of the pancreas affecting the islands of Langerhans, with consequent failure of the inhibitory power of the pancreas, this stimulating power of adrenalin upon the excitability of the sugar-mechanism will be enormously increased. In many cases, owing to the nervous control of the suprarenal bodies, severe nervous excitement may increase the glycosuria, or convert a mild case of diabetes into a severe one.

The *thyroid gland* and pancreas are antagonistic in their influence upon sugar production, the internal secretion of the thyroid gland inhibiting the excitability of the pancreas. Thus, glycosuria can be produced by thyroid feeding, even if the subject be on a mixed diet; on the other hand, it is almost impossible to produce glycosuria in thyroidectomized animals, or in human sufferers from myxedema.

The *parathyroid bodies* are believed to have an influence upon the sugar-forming mechanism antagonistic to that of the thyroid gland; but the rationale of this is not at all clear.

The *hypophysis*, or pituitary body, is believed to have a thyroid-like action upon the pancreas.

Cause of Diabetic Glycosuria

The immediate cause of the overproduction of sugar, and the consequent glycosuria, is the morbid hyperexcitability of the liver. Under normal conditions of liver excitability, the pancreas and suprarenal bodies accurately control sugar production, regulating the amount of sugar produced and set free into the blood stream according to the needs of the moment.

But in diabetes, the liver responds enormously to every stimulation from the suprarenal bodies, especially if the inhibitory action of the pancreas be diminished or removed. Then the slightest stimulus sets up feverish activity in the "sugar-factory," as von Noorden aptly terms the liver; and the blood is flooded with glucose, greatly in excess of the immediate needs of the tissues; and because of this enormous excess of glucose in the blood, glycosuria results.

Because of the hyperexcitability of the liver, the proper relation between strength of stimulus and its resultant effect (in amount of sugar set free) is not maintained; and the degree of disproportion determines the severity of the diabetes.

There is apparently no lack of power on the part of the diabetic's tissues to oxidize sugar; the trouble lies in the overexcitability of the "sugar-factory," with consequent failure of the regulating action of the pancreas.

Most cases, then, if not all, of chronic diabetes are owing to pancreatic insufficiency.

there is every reason to believe that a healthy, functionally active pancreas is at all times able to make felt its inhibitory action upon the liver. But when alimentary, nervous or toxic stimuli, which would not produce glycosuria in a normal individual, always cause fresh outbursts of glycosuria, it is but reasonable to assume that pancreatic insufficiency exists.

[*To be continued.*]

Jonathan Hutchinson

An Appreciation of a Great Man

By JAMES MOORES BALL, M. D., LL. D., St. Louis, Missouri
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A GREAT physician has passed to his rest. The death of Jonathan Hutchinson, which occurred at his house, at Haslemere, on June 23, 1913, removes from English medicine one of its most interesting and most versatile characters—a man who, forming part and parcel of the medical history of the nineteenth century, carried his influence, his studies and his intellectual vigor well into the present period. To few men is it given to follow the profession of medicine for more than sixty years, and to still fewer is it granted that even the latest of these years shall be fruitful.

Jonathan Hutchinson, the offspring of Quaker parents, was born at Selby, Yorkshire, July 23, 1828. At an early age he was apprenticed to a surgeon at York, and at the same time he studied medicine in the York County Hospital and in the York School of Medicine and surgery. In this small school Hutchinson was the only member of some of the classes, and thus he received the benefit of personal instruction. Removing to London in 1849, Hutchinson entered St Bartholomew's Hospital, and in 1850 he took the degrees of M. R. C. S. and L. S. A. Soon thereafter he was appointed surgeon to the Metropolitan Free Hospital, and early in the fifties he was made assistant surgeon to the London Hospital and surgeon to the Royal London Ophthalmic (Moorfields) Hospital. He also became connected with the Blackfriars Hospital for Diseases of the Skin. For many years he served these institutions as well as the Royal Lock Hospital. Nor does this list include all of his hospital appointments. The honors which he received at the hands of the London and British profession are too numerous to be mentioned in this place.

For an ordinary man, the acceptance of so many and such diversified hospital appointments would have resulted in a fatal dissipation of energy, but not so in Hutchinson's case. His wonderful ability is shown in the fact that he gained eminence in every field which he entered—in surgery, in dermatology, in syphilology, and in ophthalmology. He was one of that small group of English surgeons who early began to use the ophthalmoscope in the study of eye diseases. In passing, it may be of interest to note that it was an American, the late Dr. Elkanah Williams of Cincinnati, who first instructed the London surgeons in the use of this valuable instrument.

As an ophthalmologist Hutchinson won world-wide fame by his work on the relationship existing between syphilis and interstitial keratitis. The well-known term "Hutchinson teeth"gives evidence of his acuity as a clinician. The early volumes of the "Ophthamic Hospital Reports" contain many articles from his pen, each one valuable as the work of an accurate and painstaking observer. It is now more than fifty years since Hutchinson made clear the meaning of interstitial keratitis. And who can measure the value of that splendid piece of work? Who can guess the number of persons whose vision has been saved by reason of Hutchinson's writings on interstitial keratitis?

Let us give unto Cæsar the things that are Cæsar's. We of this bustling, hurrying, commercialized, and ultra laboratorial twentieth century are (most of us) too prone to overlook the debt which we owe to men of the Hutchinson type. Too many of us, I fear, look on the aged members of our profession with a feeling akin to pity; when, in fact, they are deserving of the greatest honor. Deprived of the work, the observations, and the discoveries of such men as Jonathan Hutchinson, the active practitioners of today would be as travelers lost in an African forest.

As a recent writer has said (*Lancet*, June 28, 1913), the name of the great English clinician is fixed indelibly in medical nomenclature: "the facial expression of ophthalmoplegia is known as Hutchinson's facies;

the mask-like appearance in tabes dorsalis, as Hutchinson's mask; the unequal size of the pupils in meningeal hemorrhage, as Hutchinson's pupils; the notching of the teeth in hereditary syphilis, as Hutchinson's teeth—while interstitial keratitis, labyrinthine disease, and notched teeth have received the name of Hutchinson's triad." Hutchinson's theory as to the influence of diet in the causation of leprosy is still under discussion.

The practical trend of Hutchinson's mind, and the value which he set on objective teaching, is shown in the fact that as early as in 1868 he originated the museum which is held in connection with the annual meetings of the British Medical Association. The Medical Graduates' College, London, owes its origin chiefly to him.

The writer will end this brief sketch by quoting a few words which occur in an address delivered in the London Hospital, in 1865, in which Hutchinson said: "The true use of benevolence is, to nerve a man onward in the resolute pursuit of knowledge....." It is curious and very instructive to note that, as a rule, they accomplish most who begin at the greatest distance from their object."

Cereus Grandiflorus: Its Active Principles and Their Action Upon the Heart*

By PRIVATDOCENT DR. A. GROEBER, Berlin, Germany
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EDITORIAL NOTE.—Cactus (which is cereus grandiflorus under another name) has been much discussed during recent years. Inasmuch as laboratory workers have been unable to demonstrate the presence of active principles and have failed to elicit the looked-for action upon the lower animals, an effort has been made to discredit the drug entirely. Under such circumstances Dr. Groeber's report excites great interest—perhaps may lead to the reopening of the entire problem. In connection with it read the editorial on page 796.

EVER since, in the year 1864, Rubini,[1] homeopathic physician at Naples, recommended it, cereus grandiflorus, in the form of tincture or fluid extract prepared from the stems, has maintained itself in homeopathic practice as a heart-remedy. The preparations made from cereus grandiflorus, it is claimed, exhibit an action upon the heart such as we recognize in the substances of the digitalis group. So, also, in allopathic practice, this cactacea has been employed here and there, although rather less frequently.[2] Rubini's recommendation is based upon observations of patients treated with cereus grandiflorus.

C. Hartwich[3] makes this statement (1897): ". . . . the drug contains no alkaloid or glucoside; the active constituents are said to be a few resin-acids."

On the contrary, A. Heffter,[4] in his article published a year before that, says: "Finally, I wish to call attention to cereus grandiflorus, in which, besides traces of an alkaloid, there is contained what is probably a glucosidic heart-poison."

Then, finally, mention must here be made of a statement by R. A. Hatcher and H. C. Bailey.[5] These authors do not allow cereus grandiflorus any pharmacologic action whatsoever. In cats and dogs, they did not observe, even after very large doses given by mouth, the slightest action; after the intravenous administration of very large doses, occasionally a weak influence upon the heart.

Verification of these statements seemed desirable. There were at my disposal about 7 kilos of the drug. These were worked up in two separate portions of about 3.5 kilos each.

The drug was comminuted, extracted repeatedly with 94-percent alcohol at 100° C. With this extract [the combined alcoholic tinctures] was incorporated the spirit in which the drug had been transported.

The alcoholic extract [combined tinctures] was concentrated to the consistency of syrup, taken up with water, precipitated with lead acetate, the filtrate freed of lead with ammonium sulphate, the filtrate concentrated, precipitated with tannin. The tannin precipi-

*Translation of a communication from the Pharmacologic Institute of the University of Berlin (Director: Geh. Med.-Rat Prof. Dr. A. Heffter) to the *Therapeutische Monatshefte*, August, 1913, page 581.

tate, warmed, was decomposed with lead oxide, the filtrate evaporated, extracted with chloroform, the chloroform expelled, the residue dissolved in water (1 : 30).

In the proportion of 2.44 Grams per kilo weight, the solution thus resulting, when injected into the lymph-sacs of a frog, produced the following phenomena:

One-half hour after injecting: Reduction of pulse frequency, from normal 56 per minute, to 24 per minute. Maximal increase of the systole of the heart-ventricle and of the diastole. No systolic ventrical arrest.

Another frog, after 3.33 Grams per kilo-weight, exhibited:

After ten minutes, the systoles stronger, pulse frequency fallen, from normal 45 per minute, to 35 per minute.

After twenty minutes, slight peristalsis of the heart (wrinkling of the ventricle in systole).

After thirty minutes, pulse, 25 per minute; after seventy minutes, pulse, 20 per minute; pulmonary respiration, zero. No systolic ventricle arrest. Next day, recuperation.

In the case of the other portion [of the cactus tincture], the alcoholic extract, after being concentrated, also was taken up with water, precipitated with lead, filtered. The filtrate as also the lead precipitate were worked up.

The lead precipitate was decomposed with hydrogen sulphide, filtered. The filtrate showed a slight acid reaction. Of this [filtrate], a frog of 31 Grams received 2 Cc. into the lymph-sacs.

After two hours and twenty-two minutes, the pulse frequency had fallen, from normal 58 per minute, to 18 per minute; the systoles were very powerful, the diastoles, imperfect. At the same time pulmonary respiration ceased. However, no systolic arrest of the heart occurred.

A second frog, weighing 39 Grams, also received 2 Cc. [of the foregoing filtrate] by injection. Fifty-four minutes after the injection, pulmonary respiration, zero; pulse frequency, 24 per minute against 50 normal. Three hours and forty minutes after injecting, systolic ventricle arrest. Next day, recuperation.

The filtrate obtained after the precipitation with lead acetate was freed of lead by means of hydrogen sulphide, concentrated after adding lime, extracted with chloroform. The chloroformic extract, after removal of the chloroform, yielded a solid residue, which permitted the recognition of crystals in the paste. A portion of this residue (which amounted to 1.16 Grams) was made into a solution, 1 : 100, and utilized for animal-experiments.

A frog of 29 Grams received 0.34 Gram per kilo-weight. Pulse, normal, 42 per minute.

After three-fourths of an hour, indication of cardiac peristalsis. After one and one-fourth hours: pulse, 24 per minute; pulmonary respiration, zero. After two and three-fourths hours, pulse, 28 per minute. After eighteen hours, pulse, 52 per minute; again pulmonary respiration. Recovery.

Another frog, of 36 Grams—pulse, normal, 38 per minute—after the administration of 0.55 Gram per kilo-weight showed:

After fifty minutes: pulse frequency, 30 per minute; pulmonary respiration, zero. After two hours: pulse, 34 per minute; again pulmonary respiration. Recovery.

A third frog, weighing 26 Grams, with 48 normal pulse beats per minute, received 0.77 Gram per kilo-weight.

After one and one-fourth hours, pulse frequency, 33 per minute. Thereafter gradual recovery.

Recrystallization of the second portion [of the foregoing solid residue] did not give a sufficient yield to make a test, owing to the relative amount of impurities. *The general alkaloid reactions were positive.*

The foregoing experiments indicate that cactus [cereus] grandiflorus actually is possessed of an action upon the heart such as belongs to the substances of the digitalis group: In all the frog-experiments, we find reduced frequency of the pulse; strengthening of the systole occurs; in two instances, there was slight cardiac peristalsis, and once systolic ventricle arrest.

This action upon the heart is ascribable to a glucoside (tannin precipitation) present in addition to the alkaloids in cereus grandiflorus.

In view of the minute yield of the active substance, we cannot ascribe to this cactacea an importance as a heart-remedy in the sense of an effective digitalis-therapy for human pathology.

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Some Mistakes of Doctors

Written Especially for General Practitioners

By OSMAN F. WAY, M. D., Claremont, Minnesota

FEW of us like to acknowledge our mistakes. If in our efforts we meet with what seems to be success, we are anxious to tell of it. Thus, reports of successes are widely spread, while our failures are hushed up as quickly as possible. This is wrong. If all made a practice of reporting their failures, it would be the means of doing much more good than the reporting of successes only. For often in the practice of medicine what we consider our success is not due to our efforts in the least, but is the work of nature.

It is with this thought in mind that I wish to call your attention to some of the mistakes that we, as physicians, are making, not alone from a medical standpoint, but also in a business way. And I shall call anything that works ill to either the doctor or his patient a mistake.

It is often said that doctors are poor business men. And this seems to be the rule, although in later years some physicians are awakening to this fact and are now making the business end of their work more pronounced.

These physicians generally specialize in some line. We, therefore, find the specialist demanding much higher fees for his services than the general practitioner does for his. And he generally demands his pay at the time of service, or at least makes some definite arrangement for the payment of it.

Why Turn Your Patients Over to the Specialists?

There is no reason why a specialist should receive twenty-five or fifty dollars for consultation and advice, while the general practitioner gives his consultation and advice for from one to two dollars; or why the general practitioner should treat a patient through a critical case of pneumonia, typhoid fever or any other serious condition, that often lasts from a month to six weeks or more, for from fifty to one hundred dollars, while the surgeon does an operation requiring less than one hour of his time and receives from one hundred to five hundred dollars for it—except that the surgeon or other specialist is more of a business man than is the general practitioner.

The actual skill and ability required of the general practitioner is fully equal to that of any of the specialists, and should be equally paid for.

The general practitioner has himself largely to blame for this difference in wage. He has grown into the habit of referring all his difficult cases to a specialist, until not only he but also his patients think that anything in the least serious must go to a specialist. Consequently, case after case goes to the specialist that might just as well be treated by the home doctor, if he would get to work and do it.

Especially is the surgical specialist in demand at the present time; so much so, in fact, that the principal occupation of some general practitioners seems to be the looking up of cases to refer to the surgeon, altogether too many of whom find indications for an operation on everyone so referred. And, then, some operators are in the habit of paying the home physician a small commission for referring the case.

The patient goes home, the case is reported on the records as a cure, but in a few short months he, or more frequently she, finds her old pains have returned. She goes to the surgeon again, instead of to her family physician, and perhaps finds another operation needed, with practically the same results as before. This continues until at last the surgeon can find no more organs to remove. He then tells her there is nothing that ails her but her nerves and advises her to return to her family doctor, who probably can do as much for her as anyone.

Alas for the patient! Had she received that advice before the first operation she might have been a well woman now. But it is too late; she is a nervous wreck and almost certain to remain so as long as she lives, going from one doctor to another, receiving but little benefit from any. She reads the patent-medicine advertisements, spends much money for the dope, but, still, is an invalid the remainder of her life.

Gentlemen, this picture is not overdrawn. It is happening daily to thousands, and it is a disgrace to the medical profession. In commenting on Dr. J. L. Rothrock's paper on the

subject of "Pain in the Back," *The Journal of the Minnesota State Medical Association* expresses itself as follows:

"If more attention were paid to the nervous life of the individual and more careful investigation were made into the history of previous disorders, the surgeon or gynecologist would hesitate before operating. Undoubtedly, a good many pains in the back are due to pelvic discomfort, and undoubtedly many sincere surgeons and physicians treat the pelvic organs with the idea in mind that it is a form of suggestion. The treatments are harmless and unless overdone probably relieve many pains and aches that women are heir to.

"If gynecological treatment could be carried out with this broad principle in mind, there would be less tinkering and less chronic invalidism following pelvic surgery. It is well recognized that, in the majority of women, the more the attention is fixed upon the pelvic organs, the more likelihood there is for suggestion and for the disease to continue. As a matter of fact, many of these people are relieved from their sufferings by simple methods, wholesome advice, general hygienic improvement, and a distraction of their attention from the supposed cause of pain."

The Real Surgeon vs. the Robber Surgeon

I do not want to say one word against legitimate surgery. A real surgeon stands, in my estimation, the highest of any men. But the one who operates on whoever comes, simply for the one hundred or five hundred dollars he can get, and the general practitioner who sends him the patient for the twenty-five or fifty dollars bestowed on him as commission are as much below the highway-robber as the robber is below the honest tiller of the soil. He not only takes his helpless patient's money, but he dooms her to become a lifelong sufferer from neurasthenia.

Several years ago I read before our Society a paper on "Suggestion in the Treatment of the Sick," in which I recommended very earnestly the use of suggestion as a curative agent. While I do not want to withdraw one word from that advice, I do want to sound a loud warning against the wrong use of suggestion to the sick.

The habit many people have of sympathizing with the sick, telling them how badly they look, how careful they should be, and all such talk, certainly works very strongly against the recovery of the patient. And I am sorry to say, many doctors make the same mistake when talking to their patients or the patient's friends.

Whether it is to offer sympathy, or whether it is to receive praise for a great cure when the patient recovers, makes little difference in the result to the patient. If the physician has expressed the opinion that the patient is in a critical condition, the chances are that he will have a good long job before his patient is well, even though at first very little may have been wrong. And, if the physician had been honest with the patient in the beginning, assuring him that he would soon be all right, the result would have been restoration to health in a very short time.

Of the patients I have had the fortune to receive from outside my regular field of practice, a large percentage are persons who had been led to believe, often by the attending physician, that something was seriously wrong, whereas many a time the only thing necessary to effect a cure was to convince them that there was no serious trouble present.

It is not even necessary to tell a patient by speech that he is in a critical condition. An act, or even a look, often is all that is needed to start the impression in one's mind that something is seriously amiss. And when such an idea is once started, it rapidly grows, until there soon really is something decidedly wrong, and it will require real skill to overcome this delusion.

Do Not Exaggerate the Evil

The knowledge most people have of their own body and its physiological action is very limited, and if one feels a little badly for a day or two it is very easy to make him think that something is seriously wrong. The tendency to exaggerate the bad feelings and to imagine dire evil seems to be natural to most people. And, I am sorry to say, many times the physician, instead of showing the patient that such symptoms denote nothing serious, leaves the impression that it actually is serious; and he begins to worry about it and to think of it until it is a serious matter indeed, at least of his mind if not of his body.

We see this influence very forcibly illustrated by patent-medicine advertising, which I believe to be accountable for more chronic suffering than is any other agency, although through the past few years I fear the surgical craze is becoming a very close competitor.

Every town of any size must now have a hospital, and every case that can by any means be considered surgical must be taken

to the hospital for an operation. So true is this, that a physician scarcely dares to open a boil or remove a sliver unless he has a hospital in which to do it. That this opinion is becoming quite prevalent is evident from the bill passed by the North Dakota legislature a year ago (though vetoed by the governor), requiring the filing of an affidavit stating the pathological condition that would be found, signed by the surgeon and a disinterested physician, before an abdominal operation may be performed in any hospital of the state.

This custom has been a great thing for surgeons, but it is the means of taking much practice and many dollars from the general practitioner of the small towns that have no hospitals. And I believe it would be far better for the patients if a large percentage of the ordinary operations now performed in hospitals were done at home instead, purely on account of the mental influence produced on the patient by having to go to the hospital and see so many there suffering from different forms of disease. A competent surgeon could be called to perform the work, and he be assisted by the home physician and a good nurse, the home physician and the nurse being left to care for the patient after the operation.

The Mistake of Being Ultrascientific

Another mistake of many physicians is in trying to be too scientific. These men spend too much time in studying the cause of disease, its history, the pathology and morbid anatomy, while paying too little attention to the diagnosis, and the treatment and cure. This, perhaps, is very well for the specialist; for it is nice to be able to tell all these things and thereby give the impression that we are so very wise. But for the general practitioner who does not have facilities for accurately determining all the existing conditions, it is much better to spend his time in learning what to do for the condition as seen by himself and told by the patient.

I repeat, too little attention is given by the general regular physician to the treatment of disease. This is evidenced by the number of different methods of treatment that have sprung up all over the land. Also too much reliance is being placed by the general practitioner upon the value of drugs for the cure of disease. True, it is an easy way to treat a patient by writing a prescription to be filled by a druggist and taken by the patient, while nature is trying to produce a cure. But, my brother, if we will supplement our prescriptions with common-sense advice, together with mechanical aids to nature, we shall often be surprised at the quick results of our treatment and the early restoration to health of our patient.

And here I will interpolate that one of our worst mistakes is the giving of opiates and other narcotic remedies for the relief of pain, instead of determining the cause of the pain and giving something to remove the cause. Show me a doctor who is quick to use an opiate to relieve every little pain or to produce rest, in the majority of ailments, and I will show you a doctor who is continually having long-lasting, serious cases to handle. Still, in reading our textbooks and listening to the advice of many of our instructors, we find some opiate advised more often than any other drug, and many doctors seem to follow the advice to the letter.

I am sure much of the treatment practiced even in this enlightened age is a mistake and a damage to the patient. And it is no wonder that people are becoming tired and disgusted with drug treatment and are turning to other methods for relief. And thus we see mechanical and mental methods of cure flourishing on every hand. in spite of the efforts of the regular medical profession to legislate them out of business.

The Better Way to Proceed

Now, after calling attention to so many mistakes in the present practices of medicine, you will naturally expect me to suggest some remedy that shall prevent so much of needless suffering.

First, then, I will say, one great trouble is, our leaders in medicine are almost all specialists. Our literature is nearly all written by specialists. The papers and discussions at our societies are principally by specialists.

If our patient does not almost immediately improve when we are called to attend him, we must have a specialist. If the patient does not ask it, the attending physician will advise it. Our schools and clinics are conducted by specialists.

In fact, we get most of our instruction in the practice of our art from the specialist. And the specialist, whether he be surgeon or otherwise, seldom sees the patient in the beginning of his disease, and his treatment, consequently, is not directed to the prevention nor to the cure of the first stage of the trouble. In fact, his treatment is directed to the results of the disease rather than to the cause of same. As for instance, the cancer removed by the surgeon is not the cause but the result of disease; so, too, the

enlarged thyroid gland, the tuberculous glands, gallstones, appendicitis, cataract, and, in fact, nearly all socalled surgical diseases are not the cause of the patients' illness, but the result. And it is the result of the disease that the surgeon operates upon, and not the cause. True it is, if these conditions are left and not removed they will set up still further disease, which will often result in the death of the patient.

These conditions are equally true of nearly all of our socalled chronic diseases. We are treating effects, and not causes, and the result is that, with all our scientific knowledge, with all our surgical operations, with all our scientific investigations of the history of the pathology of the morbid anatomy, in fact, by the present method of medication, disease is as prevalent as ever and our race is becoming a race of neurasthenic invalids.

Whose Is the Fault?

Now, who is to blame for this condition? Is it the surgeon? Is it the nerve-specialist? Is it any of the different specialists?

No, it is none of these. They are doing their work well and they are having more and more of it to do. All because you and I, who are common, general practitioners, are not doing our work as we should, by being more thorough with our treatment right in the beginning.

Surgeons claim that in seventy percent of their operations for diseases peculiar to women the cause is traceable to indiscretions of the husbands in youth. And this because we, as the young men's physicians, have not done our duty and cured them when they consulted us.

We have read the textbooks of specialists. We have attended their schools, we have witnessed their clinics, we have attended their societies, have read their journals, we have prescribed their serums with so much admiration that we have overlooked the fact that we are learning almost nothing of our art to treat and cure disease in its beginning. And consequently there are more people dying right in our midst today of socalled preventable disease than there were ten years ago. And about all we do to relieve them is to prescribe the elixirs, serums, and numerous mixtures prepared by pharmaceutical chemists and sold to us much as a patent medicine is sold, as a sure cure for all ills. And the recommendations of these pharmaceutical concerns, who have never studied disease of any kind, is all we have to assure us of its uses. As a consequence, notwithstanding all of our specialists' teachings and operations, deaths from socalled preventable diseases is continually on the increase, as the following statistics of our own state, comparing the deaths in 1900 and 1910, show.

In the following, the first number after each disease is the number of deaths in the year 1900, the second is the number in 1910, as reported to our own State Board of Health:

Tuberculosis, 1864 and 2250; cancer, 662 and 1385; scarlet-fever, 80 and 283; pneumonia, 1238 and 1914; typhoid fever, 571 and 683. Which figures, although the population of our state has considerably increased during the time, indicate there is still an increasing death rate.

Government statistics of England show that for the fifteen years from 1879 to 1894, before antitoxin was in use, there were 2541 deaths from diphtheria to each one million inhabitants, while in the next fifteen years with antitoxin treatment there were 3451 deaths from diphtheria to each one million inhabitants.

Dr. Ira S. Wile, in *The Lancet-Clinic*, says: "Since 1880, the death rate from cancer in seventeen states has risen from 361 per ten thousand population to 7.35." And this notwithstanding the early operations now performed on this class of patients; deaths from cancer of the breast, which is now operated upon so early, having risen from 5.7 to 7.3 per ten thousand.

These all prove that the practice of medicine is not the success it should be, and should cause us to pay more attention to the early treatment of all diseases; for in the beginning nearly every disease is easily managed and a cure produced, if properly treated. And little need should be left for the surgeon or any other specialist.

Some Real Successes

The teaching of Dr. Burgess, in his little book, "The New Field," and similar work, in which he says there are but five causes of disease, viz., retention, invasion, innervation, poison, and trauma, has done more to help me take care of my patients, from the beginning of their illness to a restoration to health, than all the other instructions on treatment I have received. This method of treatment, supplemented by common-sense suggestions of encouragement, has given me success in treatment that I could not achieve with the ways of my earlier teaching.

In proof of this assertion, I wish to refer to the last 767 original calls to patients I have

received, to 672 of whom I made but one visit, to 43 I made two visits, to 23 three visits, to 8 four visits, to 3 five visits, to 4 six visits, to 3 seven visits, to 3 eight visits, to 1, ten visits, to 1 eleven visits, to 2 fourteen visits, to 1 seventeen visits, to 1 twenty-one visits, and to 1 thirty visits, making a total of 1092 visits. In this record have been 14 deaths and 72 births, and 9 sent to the hospital.

Of the deaths, 5 were from pneumonia, 3 of whom were infants less than six months old, 1 a man over seventy years of age with chronic bronchitis, and the other an alcoholic inebriate who had the pneumonia several days before I saw him. Four deaths were from cancer, 1 from apoplexy, 1 septic cystitis with enlarged prostate, 1 diabetic coma, and 1 septic endocarditis.

In my practice, in which I have nearly all the work in a territory of 150 square miles with a population of about 2000, I have not had a case of diphtheria for more than three years; although I have seen several throats which a few years ago I should have expected to develop serious cases of the disease. Nor, during that time, have I given a dose of antitoxin. During the same length of time I have had but two runs of typhoid fever, one of them being taken sick away from home and having been sick quite a while before I saw him.

During the past four years I have had in my practice 26 deaths and 115 births. Of the deaths, 8 were infants less than six months old, 12 were from sixty-five to eighty-five years old, and 6 between six months and sixty-five years. Of the 6 between six months and sixty-five years, 2 died from tuberculosis, 1 from an accident, 1 from acute endocarditis, 1 from acute mania, and 1 from septic peritonitis.

Such results as these I believe speak well for a more rational treatment than that usually advocated by our specialists in the early treatment of diseases.

We, the general practitioners, have built up the specialists, not alone by neglecting our duty to cure our patient in the early stages of the disease, but also by sending the patient to the specialist for treatment.

Very few specialists would achieve any great success if it were not for the general practitioners who send him their patients. In the early days, when a patient was referred to a specialist, the latter gave his advice, received his pay, and the patient returned to his home physician to receive the treatment. Or, if the case were a surgical one, the surgeon came to the patient's home, did his work, and left the patient to the care of his home physician. But now when we refer a patient to a specialist we virtually bid him goodby; as he will be taken to the hospital or the sanitarium and there treated without our help. And, if we intimate that we should get some pay out ot the transaction, we get for answer, "Oh, no, that is not ethical." Gentlemen, it may not be ethical, but it is Business.

Should we continue being "ethical" agents for the specialists, or shall we be professional business men for ourselves and our patients?

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[If we understand Doctor Way aright, he has no bone to pick with the surgeons or other specialists. His plea is primarily for the early recognition of disease and its treatment before it has reached the stage of positive damage; he thinks that, if we, as physicians, did our whole duty in preventing disease or arresting it in its incipiency, comparatively few patients would need to be sent to hospitals for operative work of any kind.

In the main, we agree with Doctor Way. The doctrine he preaches is not a new one; indeed, it is that of the great Belgian master, Burggraeve, who assailed again and again the expectant mode of medication in vogue in his days, and which still is the fashion in many quarters even now—a mode that taught the physician to sit idly by, *waiting*, till the functional disturbance capable of being jugulated was converted into an organic process which would run its course, and, if it did not kill, was bound to leave its permanent scars behind.

"What does the physician too often do?" writes Burggraeve. "*He waits*, and limits himself to general dietetic measures. But at the end of a few hours, perhaps in the interval between the first visit and the second, danger appears; and now it is too late to act: cerebral, thoracic, abdominal or other symptoms have appeared, and the disease has taken the form of a meningitis, a carditis, a pneumonia or a gastroenteritis, and after that it must be cared for through all its stages. With dosimetry, we do not lose a minute. The physician, with his pharmacy 'in his pocket,' observes the patient's condition, acts at once, and cuts short the disease."

"But what shall the doctor do," you ask, "to prevent or arrest disease in its incipiency?" This is what he must do: He needs to keep in mind the fundamental causes, to some of which Doctor Way refers in his citation from the work of Burgess. Further, he needs to

keep in mind some of those general principles of treatment to which we have alluded so often, namely, the importance of attacking bacterial causes, of eliminating the waste, of arresting autotoxemia, whether alimentary or systemic, of equalizing the circulation, of stimulating innervation, and of securing proper nutrition. If we only would keep *these* things in mind—constantly—how much we should increase our own power and how much "special" work we could save.

Use medicines? Of course! We do not take it that Doctor Way objects to the use of drugs, but rather to their improper employment. We ought to use drugs more often—but always with a very distinct idea of the end to be accomplished, never carelessly or as a matter of routine; and we should use every other remedial agency that may promise to contribute to a cure. We "active-principle" men believe in doing *all* that can be done for every patient.

How great are the possibilities of success—how wide is the field—for those who will take their professional work as a serious responsibility.—Ed.]

The Office Preparation of Surgical Dressings

Practical Help for the General Practitioner

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THE elimination of a septic environment in the operative field, as taught by the great Pasteur, has made modern surgery possible. Cleanliness—not only apparent, but absolute—is the fundamental principle of wound healing. The additional use of strong antiseptics will aid in certain exigencies, but are not needed if proper technic is observed.

The present tendency among the better class of operators is toward simplicity. Surgeons have found that they need but few wound dressings, and that these must conform to certain standards of the ideal, namely, they must be protective, absorbent, and sterile. Nothing more is required of them.

If a tissue is only injured and without positive cell destruction, a simple protection from external or foreign matter is all that is necessary. If, on the other hand, there is cell destruction—a necrosis of tissue, with the throwing off of dead cellular debris and bacterial-contaminated fluid exudate, then the dressing must be absorbtive as well as protective. Sometimes, in an emergency, the sterility of certain dressings may be in question, and here antiseptics in connection with the dressings is admissable.

Suggestions for Sterilizing Surgical Dressings

Sterilizing of dressings is best done by means of steam under ordinary pressure or of superheated steam at high pressure. For office use, a dressing sterilizer of the Rochester type with double walls and valves is the desirable thing. After filling it full of dressing packets, steam is run through for a half hour, then abundant dry heat is admitted and continued to a thorough drying of the contents. The packets may be retained in the sterilizer, thus utilizing it for storage purposes until the dressing-material is wanted.

Since the office of the average practitioner is not equipped with a steam-pressure sterilizer, many physicians having no sterilizing facilities whatsoever, it is well to recommend an inexpensive but efficient apparatus of the socalled Rochester type. Even a common steam food cooker answers the purpose very well. It is only necessary to be able to turn steam in upon the contents for a given time and then to turn it into other avenues of escape, and by dry heat to remove thoroughly every trace of dampness from the dressings.

A Practical Sterilizer

In places where gas or electricity is available, these, of course, can well be utilized for supplying heat in sterilizing. The most satisfactory office-heater I have seen, and one that I have used for years, is the Primus kerosene pressure heater. In this device, the air is pumped in against kerosene, and, after being generated by means of wood-alcohol, a hot sootless blue flame is produced, much like the Bunsen-burner flame of the laboratories. An additional recommendation is its economy of fuel and ease and quickness of operation.

Mention should be accorded the homely roasting-pan method of sterilizing, to which we all may at some time be driven in an emergency. In this case, the dressings are

simply put into a big roasting-pan with cover and the oven brought to such a heat as barely to scorch the cloth covering of the dressing packet.

One may employ the simplest of apparatus, only the procedure must be thorough. There is no half-way point in the process of perfect sterilization; a condition absolutely necessary to successful aseptic operating—either a thing is sterilized or it is not. Let us not grow weary in attention to minutiæ; in fact, modern surgical success in great measure is owing to painstaking care in the execution of seemingly unimportant details.

Dressings are conveniently cut into the desired shapes and pinned securely but rather loosely in packages of 3, 6, 12 or multiples of the same, then covered with some closely woven material such as muslin.

In carrying out sterilization, follow this general plan:

First: For thirty minutes heat in dry air, to prevent condensation when later the steam is admitted.

Second: Turn on the steam and leave for thirty minutes, or long enough for all dressings to become permeated and sterilized.

Thirdly: Turn off the steam and submit the wet contents to a dry heat until no vestige of dampness remains. Thirty minutes.

The packages, when now wanted for use, may be removed and opened by the surgical assistant without his touching the contents, which can be picked out by the surgically cleansed hands of the operator.

Materials for Surgical Dressings

Many materials have been tried in surgical clinics, for the absorption of discharges from wounds and to act as sponges in the removal of blood. Cotton in the form of gauze or the massed fibers themselves is now in universal use and eminently satisfactory because of the ease of sterilizing them, also for their cheapness, lightness, and general availability.

Ordinary cotton of the kind made into quilts is not suitable for proximal surgical dressings, because the oil is not removed and, hence, it lacks absorptive properties. It is also usually of poor color and purity. However, such cotton is very elastic and makes good padding for splint-work, while its imperviousness allows of its use as a heat and moisture retainer in the place of oiled-silk coverings over absorbent dressings.

When the oil has been extracted and the cotton bleached, the product is in every way suitable for our ideal surgical dressing. As usually cleansed, combed and put up in the packages of different weights, often it is advertised as being aseptic; however, in no nstance should this be taken for granted. One had best be on the safe side and sterilize it himself. Roll it in convenient packages, cover with closely woven muslin and sterilize well.

Why Absorbent Cotton is Used

The absorbent property of cotton constitutes it an ideal substance for mopping out wounds, especially when it is first soaked in normal saline solution, for then it acts like a wick and will not stick to wounds and the operator's fingers as does dry cotton. It should not be employed as a dry dressing on exudative wounds, for the reason that the fibers are sealed by serum or wound discharges and are apt to dry up and be difficult of removal without taking delicate new-formed tissue with it. Woven gauze is the best dressing for this kind of wound, which, though, in turn, may be covered with a cotton pad. Thus, dry cotton is not to be used in direct contact with wet or discharging wounds.

What is called the "combined dressing" is regularly applied in hospital practice, and consists of a pad of cotton enclosed in a gauze covering. It is the dressing for direct application to wounds. Caution must be observed in not making a dressing too large, one capable of absorbing much fluid, which might go unnoticed to a dangerous degree.

By far the most important item in surgical dressing is unbleached absorbent gauze. For dressings, a cloth of very loose texture is preferable, say, one having 26 to 34 threads to the inch. For bandages, a gauze of closer weave, say 40 to 42 threads to the inch, is best, because of its greater firmness.

Gauze Roller Bandages

Gauze roller bandages are conveniently obtainable, cut into proper sizes ready for use and sealed in paper direct from the makers. But when employing gauze for dressings it is economical to buy the material in 25- or 100-yard packages, 1 yard in width, and then improvise the dressings as needed.

Common gauze, or cheese-cloth, as marketed, is not absorbent and frequently is stiffened with starch. This must be removed. Boil the cloth for a half hour in a solution of common washing-soda, 1-4 pound to each 5 yards of cloth, in water sufficient. Rinse in clear water, to remove the soda, which process brings the oil out also. It now is

absorbent. Dry it, cut to the desired shape, fold to the right thickness, and cover and sterilize as above suggested. It is expedient to cut several thicknesses at a time, using large sharp shears.

In folding gauze pieces to secure greater thickness for mops or for dressings, care should be taken to fold in the edges so, that no selvedge can come in contact with the wound, since threads may become disengaged and stick to the surface.

Antiseptic Dressings

The question of employing surgical dressings impregnated with strong antiseptics has taken a decided turn toward simplification. A dressing on an infected wound, as stated, need only be sterile and perhaps wet to insure efficient removal of wound discharge and debris. Instead of resorting to the much used iodoform and bichloride moist gauze, the highest degree of dressing efficiency may be secured by applying sterile absorbent gauze to an infected wound and keeping it moist with some such preparation as Wright's solution; the formula of the latter being as follows:

Sodii citratis.....grs. 2
Sodii chloridi.....grs. 20
Aquæ destillatæ, q. s. ad.....oz. 1

In action, the sodium citrate dissolves the plasma, which is thrown out from the inflamed tissues; and this prevents coagulation. The sodium chloride acts osmotically, that is, by irritation, and the continuous flow of serum washes away wound products.

Other excellent solutions for keeping dressings wet are:

a. Hot sterile physiologic salt solution.

b. Alcohol and saturated solution boric acid, equal parts.

c. Thiersch's solution, composed of

Salicylic acid.....grs. 30
Boric acid.....drs. 2
Sterile water, enough to make.....ozs. 32

Applying Wet Dressings

In applying wet dressings, put next the wound the sterilized gauze, then layers of sterile cotton, then oiled silk or paper through which a small opening is made, to allow the solution to be applied to the point of supersaturation; this to be covered with a piece of the oiled silk and then bandaged.

If one wishes to keep his sterile gauze in sealed jars, proceed as follows: When the gauze is to be sterilized, put in also some screw-cap jars and their caps (Atlas fruit-jars are just the thing), accompanied by a long dressing-forceps, and submit all to the germ-destroying heat. Now transfer the gauze, by means of the sterile forceps, into the jars and seal them.

If a person still adheres to the use of moist bichloride of mercury gauze dressings, these can be conveniently prepared in the following way:

Proceed as directed above for gauze in sealed jars, but before the transfer is made soak the gauze in sterile vessels filled with a 1 : 1000 bichloride of mercury solution until it is well saturated and allow to stand for twenty-four hours, covered. Then pour off the excess and transfer to the sterile jars which are then sealed up airtight.

Of late, there has been a revival of the use of iodine for external wound antisepsis. Iodine gauze may be prepared by soaking the sterilized absorbent gauze in a 1-2 of 1 percent Lugol's solution. This may be sealed in jars while it is yet moist or simply dried and packed in aseptic containers. It is superior to iodoform gauze, in fact, it has been a factor in relegating iodoform to the class of the obsolete. Similarly gauze may be impregnated with antiseptics of the coal-tar series, such as phenol, tricresol, lysol or carbenzol in proper dilution, and then stored in moist condition indefinitely.

Managing Cutaneous Lesions

In injuries involving cutaneous wounds, we must first determine the presence or absence of infection and then apply the proper dressing. In general, we may state that external wounds should be treated thus:

Sterile wounds: by dry dressings.

Infected wounds: by moist dressings, combined with heat to secure the hyperemic effect.

The time has passed when all wounds were regarded as primarily infected and active antiseptics vigorously used, with the object of destroying the microorganisms, but unfortunately causing at the same time tissue necrosis—thereby defeating the object for which treatment was instituted. So, do not attempt to kill the infecting germs with strong antiseptics, but protect the wound and assist nature by applying moist warm dressings, which do not cause necrosis of the tissues, but which do favor an increase in the polymorphonuclear neutrophiles, and which will take care of the invading organisms.

The present tendency is, to exercise more careful judgment concerning the question of infection and then apply mild or nonantiseptic, but surgically clean, dressings. One should

be very careful in a clean wound not to wash away the protecting serum which nature throws out, leaving thus a *locus minoris resistantiæ* for the invasion of microorganisms.

The preparation in the office of surgical dressings is a feasible, economizing procedure and one well worth the efforts required to produce skilful results.

How to Prepare Specimens for Laboratory Examination

By J. FAVIL BIEHN, A. M., M. D., Chicago, Illinois
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THE multitude and intricacy of laboratory procedures of proven value are increasing so rapidly that only the specialist in laboratory work is able to keep abreast of the times. Though often it is of advantage to the clinician to apply some tests to specimens of urine, sputum, pus, and so on, provided he has the time, training and facilities, he must of necessity look more and more to the trained laboratory-man for assistance. I say "assistance" advisedly, because the final verdict must always rest with the clinician.

Even if the laboratory-man, as the result of a positive Wassermann test, declares a case in hand to be one of syphilis, the prognosis and treatment must rest upon the judgment of the clinician and can be based only upon the clinical examination of the patient as to the state of his general health, the extent and seat of the disease, and other factors. By presenting additional facts, either positive or negative, the laboratory may assist in making a diagnosis or in controlling treatment, but not without clinical supervision.

The laboratory is an instrument of more or less precision, to be utilized by the clinician for the elucidation of additional facts, thereby completing the chain of clinical evidence. Both clinician and pathologist have their well-defined fields. Both are necessary—one as much as the other—and the ideal condition, that producing the maximum of results, is to be obtained only by a clear realization, on the part of each, of the necessity of the other, and by their proper cooperation.

The pathologist, any more than the clincian, cannot perform miracles; and, hence, it is essential that he be afforded every possible assistance.

In the first place, therefore, the specimens submitted for examination must be properly prepared. There is nothing so productive of dissatisfaction and misunderstanding, both to the clinician and the pathologist, as an improperly prepared specimen. Further, in order to examine a specimen intelligently, the pathologist should receive a brief history, together with a note as to what, specifically, is desired. This promotes a personal interest in the case, resulting in a closer relationship between the clincian and the pathologist, while it relieves the tedious monotony of the examination of inanimate materials.

It must always be remembered that only repeated negative tests are of value. A single negative result, in the face of positive clinical evidence, is of no, or at most very doubtful, value.

Directions for Preparing Pathologic Specimens

Urine.—Urine testing, although more frequently called for than any other, nevertheless is sadly neglected. There is no disease in which a thorough examination of this, the principal excretory product of the body, will not afford valuable information. The average urine analysis, however, as performed by the hospital-interne, is worse than useless, and gives, in the majority of cases, a false sense of security.

The examination of a single voiding, when this is perfectly fresh, will demonstrate the presence or absence of the following substances of clinical interest: albumin, peptone, albumose, sugars, blood, bile, indican, pus, casts, crystals, and bacteria. While many times these data are of value, they do not give sufficient information, except when some of the pathologic constituents mentioned is present.

The quantitative examination of a 24-hour voiding is to be recommended. Then only can we determine the amount of urea, uric acid, ammonia, and so on, all of which products are highly important; but only if the total excretion can be determined. The

mere percentage of each constituent is of no value, and usually highly misleading.

The sample must be preserved by addition of an antiseptic, else there will occur bacterial decomposition, with destruction of traces of albumin, casts and other cellular elements, this resulting in a change of reaction, with precipitation of crystals, and in that manner masking the original condition and, so, often leading to false conclusions. It is a wanton waste of valuable time and reagents to examine a urine that has decomposed after being voided.

To Prepare a Sample of Urine For Complete Analysis

At least 4 ounces of a thoroughly mixed 24-hour voiding, preserved by the means of 5 grains of thymol, camphor, chloroform or toluol placed in the receptacle in which the urine is collected should be sent to the laboratory, and also, separately, 2 ounces, in another vial, of a single freshly voided sample, also preserved. The amount voided in twenty-four hours, as well as any medicine (or unusual food) taken during the preceding forty-eight to seventy-two hours, should be clearly stated.

If, in order to determine bacterial infection, especially the presence of tubercle bacilli, cultures, bacterins or animal inoculation are required, the sample should be drawn with a sterile catheter, or the first urine should be discarded and the last portion voided directly into a sterile bottle, one that has been boiled for fifteen minutes. No preservative should be added.

Sputum.—The first sputum raised in the morning furnishes the best specimen. This should come from the lungs; and the physician must assure himself that it is not saliva or nasal or pharyngeal mucus. A 2-dram specimen should be sent in a tightly corked, widemouthed bottle. In hot weather, unless cultures or the like are required, 2 drops of 95-percent carbolic acid may be added to each dram as a preservative.

Gastric contents.—From 2 to 4 fluid ounces of the gastric contents, if possible, should be sent in a clean vial. Do not add water, any preservative or other substance. Be sure to state definitely how long the material was in the stomach (one hour is probably the average time), and the exact constituents of the preceding meal should also be stated. Usually, a simple test meal, consisting of bread (or tea) and water, is required.

Blood.—A determination of the number of red and white blood-corpuscles and the percentage of hemoglobin can be made only from fresh blood at the patient's side. However, a vast fund of valuable information, resulting in the diagnosis of many diseases, can be made from a very thin smear on glass slides.

Place a prefectly fresh drop of blood on a clean slide, near one end. Then, with the edge of another slide or a cigarette-paper, quickly spread as thin as possible over the slide. It is best to send several smears—six to ten. They should be dried in the air and then wrapped separately in paper.

For a Widal test, several drops of blood should be allowed to fall from the puncture onto a clean slide, a piece of filter-paper or a clean card.

Feces.—From 1 to 2 ounces of specimen is sufficient, unless parasites are suspected, when 6 or 8 ounces is better. The patient should always be given a test meal, consisting of milk, bread, meat, fat, and vegetables, with a dram of charcoal. Collect that portion of the feces containing the charcoal and place it in a clean well-stoppered bottle. Always mention the kind of food given.

From the examination of such a sample, any marked derangement of the digestive function may be determined. An examination for tubercle bacilli is best made from a sample obtained during the diarrheal stage.

Milk.—At least 2 ounces of the milk is necessary; 4 ounces is better if a complete quantitative examination is required. One or 2 drops of carbolic acid should be added, unless a bacteriologic examination is wanted, in which cases the milk should be sent in a sterile (boiled) bottle.

Pus.—Be sure the purulent material comes from the deep portion of the infected tissues, as that on the surface is contaminated from the surrounding skin or otherwise. Always send in a sterile (boiled) bottle. It is also advisable to send from 4 to 6 thin smears (made with a cotton swab) on glass slides. The smears should be dried in the air and each wrapped separately in paper.

Tissue.—Tissues are best sent in a 10-percent formalin solution or in 95-percent alcohol, at least 10 volumes of solution to 1 volume of specimen. Do not send in gauze or the like, as the tissue will then dry to such an extent that it cannot be examined. Be sure the material comes from the lesion, and is not merely a portion of the surrounding healthy tissue. Always send a piece not less than one-fourth inch square—larger if possible. A brief clinical history practically always is necessary. In the case of tumors, the loca-

tion always must be definitely stated, otherwise the pathologist is liable to be misled.

Blood for the Wassermann test for syphilis, Abderhalden test for pregnancy, Complement-Fixation test for gonorrhea, rabies, or glanders.—These tests require at least 2 Cc. of clear sterile serum, which may be obtained in the following manner:

From the median basilic or other superficial vein, draw off, under aseptic precautions, 5 to 10 Cc. of blood. The skin over the vein should be sterilized with alcohol or chloroform, and these removed by friction with dry sterile gauze. Then apply a tourniquet (a piece of rubber tubing is the best) above the elbow. Have the patient open and close the hand several times, to increase the distention of the vein. Now insert a sterile needle of large caliber into the vein, and allow the blood to flow directly into a sterile container, which should then be immediately corked, to prevent air contamination. The puncture should be painted with tincture of iodine and sealed with colodion.

Set the blood aside, in the ice-box if possible, for eight to twelve hours. Then, with a sterile syringe, remove 2 or more Cc. of the clear serum (which should not be tinged with hemoglobin or contain suspended red blood-corpuscles) place in a sterile vial, cork tightly, and mail at once. If the serum is contaminated or contains hemoglobin, a satisfactory examination cannot be made.

Cerebrospinal, ascitic and other fluids, exudates and transudates.—In a sterile container, send as much of the material as can be collected, up to 4 ounces. It is well to make several thick smears on slides, which should be dried in the air and carefully wrapped. No preservatives should be added.

Water—For a sanitary analysis of water the bacteriologic test, requires4 ounces It should be sent in a recently boiled vial. One quart, in an ordinary bottle, well washed two or three times with the water in question and then completely filled and tightly corked, is required for a sanitary chemic analysis.

For a quantitative mineral analysis, at least one gallon is required.

The source of the water, whether a spring or pond, driven, dug or artesian well, and the distance to outhouses, stables, cesspools, and so on, should always be indicated when sending a sample.

While it is practically impossible to find typhoid bacilli even in an infected water, it is possible, nevertheless, to determine the possibility or the probability of such a water carrying typhoid bacilli or of being infected or contaminated with sewage bacteria.

Material for Autogenous Vaccines

The following directions must be observed in every instance, in order to secure material from which an autogenous vaccine is to be prepared and so as to give assurance that the material contains the infecting organism and is free from contamination.

No preservative should be added. The material, if of sufficient quantity, should always be placed in a sterile vial and sent to the laboratory as soon as possible. A brief clinical history always must accompany the specimen, as well as a definite statement as to the source of the material; otherwise the bacteriologist will not be able to judge as to which of the bacteria present are more likely to be the causative agents. Brief directions follow for the materials usually submitted.

In case of doubt, it is always advisable to write to the bacteriologist, explaining what is desired, the nature of the case, and so on; if possible, sending him at the same time several smears, simply dried on glass slides, in order that he may have a definite idea as to what bacteria are present, and, if it be necessary to send culture-media, that he may send the proper media upon which the particular bacteria concerned in the infection will develop.

Urine.—The external urinary meatus always should be thoroughly cleansed, preferably with sterile water, then the sample drawn directly into a sterile bottle with a sterile catheter,

Feces.—Feces should be discharged immediately into a sterile bottle or a large sterile receptacle, in which they are thoroughly mixed with a sterile spatula or other sterile instrument, then a small portion of the thoroughly mixed material transferred to a sterile bottle. Contamination with urine must absolutely be avoided.

Pus.—If possible, in all cases presenting abscesses, the first pus obtained upon the initial incision of the abscess should be sent. The ideal method of collection is, to paint the skin over the abscess with tincture of iodine then, with a sterile hypodermic syringe, to withdraw from the abscess-cavity the purulent material, which is immediately discharged into a sterile vial. If the abscess has been opened and is discharging or if the material is to be obtained from a discharging sinus, the surrounding skin should be painted with tincture of iodine, the superficial pus removed with sterile gauze, and the sample be obtained

from the deeper portion of the abscess or sinus by means of a sterile hypodermic syringe.

Pus from an infected eye is best obtained from the inner surface of the lower lid, at the inner canthus. Usually there is not a sufficient amount of pus to be obtained from this locality, therefore it is always essential to send to the bacteriologist for proper culture-media that may be inoculated directly with the pus, using a sterile cotton swab.

Sputum.—This requires the greatest care in its collection, as contamination from the mouth, nose, and tonsils must be avoided as far as possible. It is best to have the patient thoroughly brush the teeth and gums with a recently boiled toothbrush, wash out the mouth and gargle, and finally take a few swallows of water. It is needless to say that sterile water should be used, and no antiseptics. The sputum then raised by coughing should be expelled directly into a sterile, widemouth bottle. It is better to collect several samples (two or three). The first sputum in the morning usually is the best.

Nasal secretions are to be placed directly upon suitable culture-media and are obtained by rubbing a sterile swab over the middle turbinate bone.

In ordinary tonsillitis, the cultures are made from a swabbing of the tonsil or, after cleansing the surface of the tonsil with a cotton swab and sterile water, by means of a small sterile swab or fine probe, removing the infectious material from the crypts of the tonsil. Several cultures should always be inoculated.

In pyorrhea, the teeth and gums should be brushed with a sterile brush and sterile water, the mouth thoroughly rinsed with sterile water, then, with a fine probe, capillary pipette or sterile hypodermic syringe, the infectious material should be removed from a number of the pockets and immediately inoculated upon suitable culture-media, which should be perfectly fresh, and which may be obtained from the laboratory.

Blood.—This should be drawn the same as for a Wassermann test, except that 5 Cc. is allowed to flow directly from the needle into 50 Cc. of special broth in one flask, and 10 Cc. of blood allowed to flow into 50 Cc. of special broth in another flask.

Material may be obtained from a pulmonary lesion by means of lung puncture. After sterilizing the skin over the location fixed upon as the site of the lesion, a hypodermic needle is plunged into the lung and one Cc. of sterile normal salt solution is injected. This is then aspirated after a few seconds. (In the meantime, respiratory movements should cease, in order to prevent laceration of the pulmonary tissue.)

As before stated, the preparation of several smears immediately from the material, which should be submitted with the sample, is of the greatest importance, as these will enable the bacteriologist, by means of a direct microscopical examination, to determine exactly which of the pure cultures he obtains upon plating out are actually concerned in the infection. In this way, he is able to determine also the relative proportion of each organism and note whether or not the material as he receives it has undergone any marked change as to the kind, number or proportion of bacteria.

Careful attention to the above details or, in case of doubt communicating with the laboratory for directions, will result in the highest degree of satisfaction both to the clinician and the laboratory-man. It will prevent many misunderstandings and save much time and needless trouble in the collection and submission of improperly prepared samples, that cannot be satisfactorily examined and upon which no definite conclusions can be based.

BLESSED are they who have the gift of making friends, for it is one of God's best gifts. It involves many things, but, above all, the power of going out of one's self and appreciating whatever is noble and loving in another.

—Thomas Hughes

Some Common Things That Baffle Us

By C. ELTON BLANCHARD, M. D., Youngstown, Ohio

EDITORIAL NOTE.—In this interesting little article Dr. Blanchard discourses in an entertaining and helpful way about some of the "every-day" diseases. The readers of CLINICAL MEDICINE *will like this article—and they are promised more along the same lines.*

THERE is a good suggestion in Oliver Wendell Holmes's "Poet at the Breakfast Table," where he advises young doctors to shed their coats of ultrascientific learning and get down to common things, such as curing the bellyache and all that list of human ills so frequently met in every doctor's life. It is to help those who want to follow the advice of Dr. Holmes that I am writing this paper; although I doubt whether it will contain anything new or original. Nevertheless, it may be helpful to some, amusing, perhaps, to others; and the only apology I have for offering these suggestions is the fact that the editor has requested me to do so.

Many men, many good men, of the profession are quite at home at the bedside where a severe case of pneumonia, typhoid fever or some other serious sickness calls for the best that is in them. With the various important diseases they have splendid success. For this work they are fully prepared and equipped with the latest modes and means of treatment. Yet, these same men "fall down" completely in the case of common ailments.

To exemplify. A patient comes into the office complaining of backache. He has tried all the home-remedies he knew of. He has plied his back with mustard-plasters and a lot of other plasters bought at the drug-store. He has swallowed box after box of "liver-pills" and guzzled by the quart teas that kind neighbors guaranteed would cure him; but, for all that, the troublesome symptom persists. And now, at last, he has come to you, the doctor, after trying as long as possible to avoid you, and he wants you to cure him of this "misery in the back."

From his attitude, his stooped position, the putting of hands over a spot somewhere on his posterior aspect, you are directed to the location of his trouble. If you do as is usually done, you say, "Humph, lumbago. Here, take these," and without hesitation hand him a few of your favorite diuretic tablets, perhaps add a few "liver-hustlers," then cheerfully bid him good-day, chucking his dollar into your left-hand pants-pocket, to furnish company to like or lesser companions you have collected to help lubricate your way through life. However, if you have an inquiring mind, you might do well to ask yourself whether you have done all you could or should have done for this patient with "a misery" in his back.

If I had happened along just then, as I chance to happen along now in this journal, and you had asked me, I should have said this: "Pardon me, doctor; but, really it seems to me you have not given this man a fair run for his money." Then we should sit down and have a little talk; and the substance of that talk I want to present now.

A Brotherly Chat on Lumbago

Lumbago, that old and handy name for lumbar neuritis, after all is merely a symptom. First be sure it is a neuritis. Recently I had a case in a young lady stenographer, whose coccyx was pressed upon from sitting long hours in a hard-seated chair, and the reflex pains about the region had sent her to several doctors. They had failed after perfunctory efforts, either because the ailment seemed slight, or because they did not care to examine a young lady's coccyx, which under ordinary circumstances should not be a very unpleasant task. A soft, properly adjusted cushion cured this patient of her lumbago! The cushion—it would be a crime to neglect to mention specifically—was applied between the aforesaid hard chair and the girl's coccyx.

Lumbago is a symptom of acidosis. In some cases it is made worse by motion, other patients feel improved after moving about. The first thing in every instance is, to aid the elimination of waste. Open the bowels thoroughly with the aid of the old-fashioned blue mass and soda, or, if you prefer, use any of the vegetable cholagogs. I have prescribed also with good results castor oil, which seems to have some peculiar beneficial influence upon all forms of neuralgia in some individuals. Wash out the blood with alkaline drinks, adding colchicine, and also morning drinks of lithium citrate or other lithium salt. From the very start, I pay strict attention to intestinal antisepsis and antifermentation treatment. For this purpose, I use

the three combined sulphocarbolates in large doses, and, before meals, effective doses of the antacid powder, sodoxylin.

Sometimes I add to these measures vibration over the lumbar region, also the galvanic current (positive pole to back and negative distant), winding up with a few surges of the sinusoidal, for good measure. I have never been able to see any good from the high-frequency current in this affection, although some recommend it highly, just as some recommend almost anything psychological.

If there is pain so severe that you feel obliged to relieve it, the hyoscine-morphine-cactoid tablets are as good as anything; albeit I have seldom found it necessary to treat these cases symptomatically. Get after the cause, and your symptoms will attend to themselves.

Such local treatment as cupping, counter-irritation, and so on, may do some good, especially mental good, but I doubt whether it helps the condition itself. One old doctor said to me that he made it a rule to use "fly-blows" liberally, and thus made the skin so sore over the painful part that it made the victims forget the original trouble! There may be something in this—who can say?

As to diet and management, it is always good to cut out meat and reduce nitrogen ingestion. I also ask the patients to omit acids and fermentation-favoring foods. A week of this treatment will usually clear up any sort of "backache" that comes along.

About Sciatica and Other Neurites

What has been said of lumbago holds good for most of the neuralgias and sciaticas. There is also a neuritis frequently encountered which, for want of a better name, let us call musculospiral nerve-neuritis.

Your patient complains of pain, loss of function, and nurses the arm with great care. She (it is usually a woman) cannot put her arm to her head to fix her hair or button her dress or tie her strings or whatever it is she has to do about her neck and back. You may trace out the nerve either by the marked tenderness palpation elicits, and frequently nodules may be felt in the nerve-trunk in subjects not too fat. Some patients will complain of numbness or tingling in the fingers, along with the pain in the arm. In diabetic subjects, this may be a very distressing symptom, so that study of the urine is always a good routine measure, to exclude, if possible, diabetes mellitus.

You may find more of the brachial plexus involved, also complicated with a bursitis of the subdeltoid bursa. This is a very common condition, and people have gone along for years without cure. Surgeons have studied the condition and under general anesthesia broken loose the long-standing adhesions, dressing the arm and shoulder with the hand on the top of the head (a cruel posture, as you will know if you ever tried it on yourself for an hour or so), with more or less indifferent success. I own up to having tried it out.

Of late years, however, I am using about the same medicinal, electrical, and vibratory treatment as with lumbago, to which is added vigorous massage manipulation, such as out friends the Osteopaths might employ.

All this class of neurites and neuroses are of toxic origin. The general plan of treatment is, to aid elimination, give antacids, and clean out and keep clean. Dr. L. F. Lewis, of Akron, Ohio, recently said to me, "I can cure most of my patients with saline laxatives, intestinal antiseptics, and sodoxylin," and in a measure I quite agree with him. So will you, if you have worked along this line and given up the old plan of masking symptoms with symptomatic treatment.

A Word About Prostatitis

I must leave vertex headaches for another time, as I wish to add a word about prostatitis, in the space allowed me.

In old men, prostatic troubles are common, some mild, some severe. Prostatitis is common because gonorrhea is common and usually never cured—if, indeed, it is curable at all. Excluding malignant conditions, tuberculosis, calculi, and acute abscesses, we have here the usual and common hypertrophy. Your patient complains of difficulty in starting the urine, of some, or a good deal, rectal tenesmus, often pain in the glans penis, frequent desire to micturate, while some may notice a little blood or pus discharge at times. A few will admit a gonorrheal history; but usually old men like to forget all "wild-oats sowing" and will insist that they never had any venereal trouble, "to their knowledge"!

Often the patient will not consult you until a cold, some food or drink indiscretion or something else, brings on suppression or retention. If he has been a catheter user and has made upon himself fruitless efforts to pass his instrument, you may find such distention and irritation that you have no other course but to aspirate by suprapubic punc-

ture. This is a thing I would do only as a very last resort.

Our surgical friends are quite ready to advise prostatectomy, and insist that it is the only possible hope of saving life, and all that, just as some are equally ready to advise ovariotomy in every case of ovaritis. You will notice I am talking about the common thing, prostatic hypertrophy, and have marked off the list the real surgical conditions.

I have seen so many uncalled-for prostatectomies (and did a few myself in my earlier years of practice, when I felt the call of surgery more than I do now) that doomed the patient either to permanent urinary incontinence or to a "catheter-life," that I must put in my word to call a halt on this sort of practice. It cannot be the surgical fees that induce surgeons to do these operations; it must be impatience with medicinal and non-surgical treatment.

To illustrate: Not long ago a physician called me to examine his father, and there was presented the typical condition I am trying to describe. The man had been a confirmed user of gin and whisky as well as beer. General condition good. At my suggestion, another physician was also called to examine the man. He advised operation at once as the only hope, and suggested calling in our leading surgeon to see the patient.

The surgeon called and confirmed the doctor's diagnosis, and added his prediction that operation was the only chance. The old man, however, entered the game right here and told his son, the doctor, that he would die a natural death, if he was to die, and would not submit to an operation.

I was then recalled, and I continued the nonoperative treatment. The catheter was passed with care and under all possible aseptic precautions. The bladder was washed out daily with hot boric-acid solution, the prostate gland was massaged per rectum, the bowels were kept free, beer and whisky were taken away (although this made the old man complain of great weakness and sleeplessness), the galvanic current was applied, with the positive pole by the rectal electrode, and the negative, distant.

Internally, we gave what I call a sanmazio compound, the formula of which is:

Zea mays, fl. ext.	drs. 2
Triticum, fl. ext.	drs. 2
Saw-palmetto, fl. ext.	drs. 2
Santal-wood, fl. ext.	m. 30
Lithium benzoate	grs. 12
Lithium salicylate	grs. 12
Alcohol	drs. 2
Glycerin	drs. 2
Simple elixir	drs. 3
Water, enough to make	ozs. 6

Directions: Give 1 teaspoonful four times a day, or oftener during the early stage of treatment.

To this add one tablet, at meals, made up as follows:

Ext. cannabis indica	gr. 1-10
Chromium sulphate	grs. 2
Zinc phosphide	gr. 1-10
Ext. nux vomica	gr. 1-8
Cantharides	gr. 1-12
Avenine	gr. 1-200

Locally, I use for instillations, with a deep urethral applicator, an ointment made thus:

Picric acid—30 grains to the ounce.
Bisulphate of quinine—20 grains to the ounce.
Lanolin and glycerin for base.

As is often the case, this man suffered much from vesical tenesmus. There was a constant desire to urinate, even when bladder had been but the moment before emptied as far as possible. The granules of hyoscyamine, gr. 1-250, were used every half hour until the troublesome symptom subsided, then left off. If the tenesmus appeared again the doses were repeated as needed, but within a few days the treatment as outlined began to clear up the condition, and the hyoscyamine was left off entirely.

Under this treatment, our patient, as many others of like type, has left off the use of the catheter, and is taking his meals and beer regularly, and has made as good a recovery—as well as such cases ever do recover. Examination shows the prostate gland reduced to nearly normal size, and there are now, after about two months, no distressing symptoms whatever.

Such is my comment upon a few of the common things that baffle, and which remarks, I trust, may be helpful to others. I have found these means and methods quite satisfactory many times, and feel sure you will also.

Korean Medicine and Surgery

As Practiced by Native Doctors

By NEWTON H. BOWMAN, M. D., Choon Chun, Korea

EDITORIAL NOTE.—In July we printed an interesting paper by Dr. Mary S. Stewart, of Seoul, Korea, upon "The Korean Doctor," and this we are much pleased to be able to supplement by Dr. Bowman's article upon a similar subject. These contributions from foreign lands show us most graphically the great field our medical-missionary brethren in the Orient are tilling.

THE elements of Korean medicine have long been wrapped up in superstitious vagaries, of which much has been written, but amid it all there does exist a real system of medicine and surgery among the native doctors, and it is so recognized by the laity.

The official basis of their practice and of their knowledge of drugs is incorporated in a book called "Pang-uak-hap-pun." This book corresponds to a work on materia medica and therapeutics in combination with a formulary and a repertory, and it is printed in classic Chinese. This book is possessed exclusively by those professing to be doctors, and the laity have no definite knowledge of what it contains, except as the doctors choose to reveal it.

The names of the disease and the remedy are coined into a group of characters, composed of two or more, indicating the exact formula for any given disease known to the native profession. Thus, in the prescription for "colds," betonica officinalis is the chief remedy. This is called "ko'ak-hyang," which, literally translated into English, means "the betonica right-breathing remedy." This particular formula, a representative one, is composed of eleven ingredients, containing from 25 to 75 grains of each drug, making a total of 350 grains. These compound remedies cover a wide range of ailments and are employed according to the indications laid down in the official compilation. Many of the prescriptions have become popular with the laity, but they have no knowledge of what they contain, beyond, perhaps, the principal herb by which name the prescription is known.

The Method of Preparing Drugs

Weeds, barks, roots, and the like are first chopped into small pieces, with a large knife fastened at one end to a board. The quantity of herb is then placed in an iron mortar resembling somewhat a miniature boat, over which is rolled to and fro an iron wheel until the contents are powdered. Thus prepared, the drug is wrapped in a tough brown paper made from the pulp of the bark of the mulberry tree, labeled, and tied up to the low overhanging ceiling until the occasion requires its use. Out of these paper bags of medicine the doctor prepares his prescriptions according to the formulas laid down in the book, which lies open before him. Each drug is carefully weighed out, carefully wrapped in paper, and given to the patient to take home, where the remedy will be made into a decoction. The prescription is sometimes made into a single dose consisting usually of about one quart. Then, again, the prescription may be divided into three or four parts, and one part made into a quart decoction, repeating the dose at equal intervals three or four times a day.

The doctor seldom prepares the decoction himself, except in emergencies or for the purpose of obtaining a solid residue by prolonged boiling and at length evaporating the water. Such a residue is made into a pill of about the size of a medium-sized marble and given just so, anywhere from a few to fifty a day.

Some of the Remedies Employed

Drugs are seldom employed singly, but are usually combined with many others, constituting a remedy-complex for a given disease, as previously mentioned.

Ginseng perhaps heads the list, next comes the mint family, and for a long time Japanese aconite was much employed; but the latter has now been prohibited by the authorities, because many have died from taking the Korean prescription containing it. Coptis tecta, imported into Korea from China, is uniquely employed in the form of a decoction into which those suffering from sore eyes dip their handkerchiefs; the handkerchief coming out a beautiful yellow color, owing, of course, to the presence of berberine. This is the only rational treatment for sore eyes that I have ever known the Korean

doctors to employ, and it is quite popular with the "grandmas." Then there is a certain common roadside weed, belonging to the daisy family, which occupies a prominent place in the native materia medica. Also, no prescription would be thought suitable for taking if it did not contain licorice-root.

Mercury and arsenic, fused together into a stick, are burned and the fumes arising therefrom are inhaled as a cure for syphilis. This preparation, like many others, is imported into Korea from China. One stick represents a single treatment and is supposed to approximate a cure. The time consumed in taking the treatment is usually about one and a half hours and, in the language of parlance, the patient is "laid out" for two or three days, after which time some (not all) develop salivation in varying degrees.

This treatment has done much harm in Korea, notwithstanding the fact that its use has been ethically confined to the native profession; and, so far as I know, the remedy has never found its way into the hands of the "lost-manhood" brother, there being no such distinctions in the profession. However, I have seen several who had lost their manhood, world without end, as the result of this treatment.

The use of roasted rats, boiled dog-meat, crows, magpies, and the powdered claws and hoofs of animals does not belong to the official class of remedies, neither are they endorsed by the profession proper; however, they, and many others, such as would not add dignity to these pages, are used by the laity as medicine.

The Personnel of the Profession

The profession of medicine in Korea is an exclusive one, because men do not choose it, but the profession chooses the man, and he is trained by a preceptor for a period of three years in the art of preparing medicines and treating the sick. In the meantime the student is taught classic Chinese (the Latin of Oriental languages), in order that he may read the official book of material medica and therapeutics, which is ever to be his basis of medical thought and action.

The doctor is respected by his people and is regarded as a friend in times if sickness. He is above the average in point of intelligence from the standpoint of his own countrymen, notwithstanding the fact that other observers have thought different. While it is true that the sciences of anatomy, physiology, pathology, and bacteriology are to him unknown, yet, what he does not know of these or other subjects he pretends to know, for he is trained in all the arts of self-possession and knows how to inspire his patients with confidence.

The trained native doctor is a materialist and believes in the curative virtues of medicine; however, there are times when he fails to effect a cure, or even to relieve—nay, even more, some of his patients die—but he is not discouraged. He is strictly opposed to the "mudang" (the gobetween of the devil and the sick) and does not endorse the custom of employing charms and incantations for the relief of the sick, because there are no superstitious beliefs taught in his standards of medicine. The domestic medicine, however, is full of magic and superstition, in common with the beliefs of the country.

The General Practice

The visiting of patients in their homes is not so generally practiced, on account of the rigid orthodoxy of queer customs that hedge in the sexes. Nevertheless, there are many conditions that will admit of the doctor's services to women in the homes, although rarely in any obstetrical work, as the "grannies" have monopolized this practice under the "customs act."

The amount of house-to-house practice the doctor does during the day may be determined somewhat by the degree of his soberness, as it is the custom to give the doctor a drink of "sool" (the national beverage) before he departs, especially if the patron plans not to pay—which is most generally the case.

The doctor, under the moral law of his country, is required to answer the call of the sick, whether it be night or day, summer or winter, pay or no pay, and if he refuses without any good reason, disgrace is his reward.

The income derived from the general practice may be safely estimated at about 50 to 100 dollars for the year. There may be some who receive as much as $200 or even more, but it is the exception. This income, however, enables the doctor to live in keeping with his needs and possibly better than the average citizen among whom he ministers.

The most lucrative side of the doctor's income is derived from the sale of medicine rather than from the professional services; therefore the Korean drugshop is nearly always owned and conducted by the doctor.

Under this head many atrocities have been perpetrated on the human race the world over,

but I believe Korean native surgery takes first place in point of crudeness. All Korean doctors do not make pretences at surgery, while, on the other hand, all those who pretend to do surgery also practice general medicine.

The instruments in use are few and simple. There are four kinds, called chims, and they are: (1) a small steel needle, (2) a large silver needle, (3) a steel knife, and (4) an iron rod.

The small steel needle is about two inches long, resembling a darning needle, but has no eye. It is used to make small pepper-box perforations of the skin over painful regions, such as swollen limbs, joints or other parts of the body. The needle is held between the thumb and forefinger and, with a telegraphic movement of the wrist, showers the skin with innumerable small punctures from which blood oozes. This method is employed frequently over the stomach for severe pain, and I have seen some who has punctured areas as large as a dinner-plate as a result of this treatment.

The large silver needle is about the size of a knitting needle and is six inches long. It is sharp at one end, and slightly larger and threaded with screw-like corrugations at the other. This instrument is used to pierce swollen limbs or joints, and it is sometimes inserted over the pit of the stomach from a fraction to the depth of one inch. The surgeon polishes it in his hair! With a dexterous movement he plunges the needle into the part affected, making at the same time a rotary movement of the instrument between the thumb and forefinger, which facilitates its entrance into the tissues; then the needle is released and the operator thumps the free end with his finger. Then the needle is withdrawn, to be reinserted at another point in the same manner.

The steel knife has every appearance of a crudely constructed dagger and is about four inches long, equally divided into handle and blade. This instrument is employed only to open abscesses deeply situated, and when there is little or no "pointing."

The iron rod, twelve inches long, about the size of a lead-pencil and blunt at both ends, is the only instrument employed hot. This is the notorious "fire-chim" of Korea that has offended every humane society on earth. The instrument is heated red-hot and made to burn its way into the tissues.

Amputations of the neck of the womb are frequently done for women whose womb is protruding from the vagina, as in "falling of the womb." The method employed is as follows: The neck is tightly ligated, close up to the body of the womb, with a strong cotton cord, which serves the double purpose of choking off the blood supply and of making downward traction; then the hot iron is applied thoroughly over that portion ligated off by the cord. The cord is left intact until it comes away with the slough, which in effect completes the operation. Strange to say, many victims live through these ordeals, and are alive today to tell the tale.

This same instrument is used also to open abscesses that are not deeply situated and definitely "pointing." Other operations are being done with this instrument, by the laity and socalled Korean doctors, that have been erroneously ascribed to the regular native profession. The burning of children on the head for fits and on the back for worms is a procedure that belongs to domestic medicine, which is not within the province of this paper to discuss.

Anesthetics, either general or local, are not employed; neither is there any attempt to relieve pain or mechanical injuries, such as cuts, broken bones and the like. However, since the introduction of the hypodermic syringe and needle into Korea by the medical missionaries, some of the native Korean doctors have been observant enough to note its advantages over their crude needle and have secured a few discarded antitoxin syringes, with which they are injecting a decoction of opium for the relief of pain. Needless to say, many of their patients have taken refuge in the last long sleep.

The high mortality from disease in Korea is not altogether attributable to the crude and barbarous methods employed by native doctors, but is the result more especially of the bad sanitary conditions under which the people live and of the curative methods employed in domestic medicine.

The International Medical Congress

The Story of the Recent London Meeting

By OUR LONDON CORRESPONDENT

THE opening of the International Medical Congress in London on August 6 by Prince Arthur of Connaught (on behalf of the King), who was supported by the Secretary for Foreign Affairs, Sir Edward Grey, was a brilliant ceremony. As the Albert Hall was practically full, even to the topmost balcony, there must have been present nearly 10,000 interested people. (It was announced afterward that 7400 members had registered, while large additions were made on succeeding days.) The governments of twenty-five countries sent official representatives, and uniforms and academic robes gave a brilliant color-tone to the assemblage.

Sir Thomas Barlow describing, in his presidential address, medicine as "an affair of world-politics" was a most felicitous expression and will linger in memory. He paid the homage of the profession to Pasteur, Lister, and Koch, as also to Huxley and Virchow, those great masters of the past generation who were the lights of the Congress of 1881, and in that connection reviewed the advances that have flown from the pioneer work of these men. He expressed encouragement for the future, and welcomed the guests from foreign lands.

A notable event was the dinner given by the British Government, on the night preceding the opening of the Congress, to some 600 of the more eminent members of the profession, with Lord Morley presiding. This event marked an epoch in State recognition of the medical parliament.

The Addresses

The address in medicine by Professor Chauffard, of Paris, delivered on August 6, was on the methods, evolution, and present limitations of medical prognosis. He reviewed the development of the methods of diagnosis, of which prognosis is the corollary and practical application.

Professor Harvey Cushing's address in surgery was a vigorous justification of the essential need of animal-experimentation, not only for human beings, but for the animal world itself. He also urged a revolution in the system of medical education on the well-known lines laid down by Mr. Abraham Flexner, by the dissociation of teaching from private practice, and the furtherance of research-work as an integral part of university education on the hospital-unit plan, of which Sir William Osler is the champion. British medical opinion, however, does not entirely indorse this point of view; the main objection being, that the intimate association of the teacher with practice, coupled with the practical part played by the students as dressers and clinical clerks, in which they have personal charge of cases, conduce, as Mr. Flexner admitted in his report on medical education in Europe, to the production of an exceptionally well-trained type of general practitioners, which would be jeoparded by any alteration of the system in vogue at present.

Prof. Ehrlich's address in pathology, which was editorially described in *The Times* (London) as a model of authoritative yet modest exposition, was in the main devoted to an exposition of chemotherapy, and especially to the use of salvarsan and its effects and limitations. Professor Ehrlich was very enthusiastic in maintaining his ideal, and answered criticisms and explained details, and prophesied most confidently great conquests in the near future from the application of the principles of chemotherapy.

Professor Bateson, of Cambridge University, in his address on heredity, summarized the Mendelian principle, discussed conditions showing dominant descent and recessive conditions, the descent of the sex-limited type, inhibiting factors, the inheritance of normal characteristics, the descent of insanity and other conditions, and the relation of eugenics to legislation.

Professor Bateson made one statement that is especially worthy of attention. He pointed out that the American student of genetics had clearly shown at least one marked recessive condition in feebleminded-ness; and, in this connection, he asserted that the Mental Deficiency Bill was a wise beginning of reform. But, he added warningly, one could not hear, without disquietude, of the violent measures, with similar aims, that were being adopted in certain parts of the United States. It was one thing to check the reproduction of hopeless defectives; it was different, however, to recognize a wholesale tampering with the structure of a population,

such as would follow if any marriage not regarded by officials as eugenic were liable to be prohibited, as was actually proposed in Pennsylvania and New Jersey. Nothing yet ascertained by genetic science justified such a course, and we might well wonder how genius and the arts would fare in a community constructed according to these unscientific notions.

The address in public health, by the Right Honorable John Burns, M. P., president of the Local Government Board, dealing with the relationship between medicine and public health, was delivered on August 12. The speaker gave a vivid description of the past saving of life, owing to sanitation; he discussed the doctrine that dirt makes disease; described the stages in the registration of disease; and considered the scientific period of disease prevention, and touched upon Pasteur, Lister, Semmelweis, and Koch, in enumerating the factors in the reduction of tuberculosis and the evils of urbanization, with a partial remedy therefor. He dealt with the application of science in medical practice, the ever increasing institutional treatment of disease, the role of the nurse, and finally the interdependence of nations in the matter of public health. It was a truly remarkable address.

The Work of the Different Sections

It would obviously be quite futile to attempt anything like a summary of the proceedings of the Sections. A most concise abstract of even any one section would take a lot more space than this entire letter can be accorded. I shall, therefore, refer very cursorily only to a few outstanding topics that were of supreme importance in themselves or at least attracted much attention.

It really looked as though the long-prevalent "conspiracy of silence" with respect to the venereal peril was at last to be overcome. The way had already been paved by a brilliant communication published in *The Lancet* (London), before the date of the meeting, in which Sir Malcolm Morris called upon the Government to appoint a royal commission that should investigate the prevalence of these antisocial diseases and to suggest a line of defense against their progress. This was followed up by a letter in *The Morning Post* of July 22, signed, not alone by Sir Malcolm Morris, but by 37 other medical men and women ranking among the leaders of British medicine, endorsing the request. In addition, the British Medical Association at its meeting at Brighton, adopted a resolution also approving the suggestion. So it was that when, on August 9, this subject came up before the joint sessions of the Sections on Dermatology and Syphilography and of Forensic Medicine, the ground had been fairly cleared for the resolution that was passes by the sections named and subsequently sent up to the whole congress; this resolution reading as follows:

"That, sensible of the ravages wrought by syphilis in the health of the community, and deploring the inadequacy of existing facilities for checking its dissemination, the International Medical Congress calls upon the governments of all countries here represented:

"1. To institute a system of confidential notification of the disease to a sanitary authority, wherever such notification does not already obtain.

"2. To make systematic provision for the diagnosis and treatment of all cases of syphilis not otherwise provided for."

It is satisfactory to note that an announcement was subsequently made in the House of Commons that the British Government intends to institute an inquiry into the disease. Which fact, as one of the German delegates remarked, should be a splendid example to other governments.

The subject of animal-experimentation, which was so forcibly dealt with by Dr. Harvey Cushing, subsequently was taken up in the section on Physiology and in other Sections, and the following resolution was passed:

"That this Congress records its convictions that experiments on living animals have proved of the utmost service to medicine in the past, and are indispensable to its future progress. That, accordingly, while strongly deprecating the infliction of unnecessary pain, it is of opinion, alike in the interests of man and of animals, that it is not desirable to restrict competent persons in the performance of such experiments."

A Discussion of Arsenobenzol

At a combined session of the Sections on Naval and Military Hygiene and of Dermatology and Syphilography, the subject of salvarsan naturally attracted considerable attention. The discussion was opened by Ehrlich himself, who considered the drug from a chemical standpoint, its limitations, dangers, and so on. It was continued by Gibbard, Wassermann, Hallopeau, Malcolm Morris, Leredde, McDonagh, Saalfeld, Basch, Berry, Levy-Binz, Hata (Ehrlich's collaborator), Blaschko, Fordyce, Schreiber, McIntosh, Ullmann, Yadassohn, and Harrison.

The discussion showed that in most points there was a general agreement and that, if too much had been expected of salvarsan, at least it was of great service and a valuable adjunct in the treatment of syphilis. It is worthy of notice, in this connection, that on August 5, the day before the Congress opened, an inquest was held upon the body of an American who died, at his apartments in Eaton Square, after an injection of salvarsan—6 grains of the drug. Death, in the medical opinion, resulted from heart failure consequent upon arsenical poisoning.

An interesting discussion on the treatment of diabetes took place in the Section of Medcine, under Sir William Osler, when Dr. Dock, of St. Louis, called attention to the importance of considering the causation of the glycosuria, inasmuch as diabetes might be caused in at least seven different ways. Prof. von Noorden, in an able paper, insisted upon the need of individualizing. He advocated giving two or three ounces of whisky daily in severe cases. To this suggestion Prof. Saundby, of Birmingham, took exception.

Some Important Surgical Papers

Tumors of the brain gave rise to the most important discussion in the Section on surgery, following a paper on the indications for operation, read by Sir David Ferrier. A number of distinguished men took part, including Bruns, Cushing, von Eiselsberg, Tooth, Bramwell, Krause, Horsley, and McEwan. To operate, after an accurate diagnosis has been established, appeared to be the sense of those present; although the difficulties of such diagnosis were insisted upon, Bramwell expressing the opinion that surgeons could do little for brain-tumors.

An interesting discussion took place, in the Section on Orthopedics, on Albee's method of bone transplantation in Pott's disease of the spine. A piece of bone from the tibia is inserted into a furrow made in the spines of the diseased vertebræ, thus acting as a splint. Dr. Albee had performed the operation at the National Orthopedic Hospital in the morning. Dr. J. B. Murphy also read a communication on the subject.

Value of Cardiac Remedies

In the Section on Therapeutics, the comparative value of cardiac remedies occupied a prominent place. Gottlieb, of Heidelberg, referred to recent pharmacological observations on digitalis, while Janeway, of New York said that from the clinical viewpoint, the indications for digitalis-therapy had become increasingly precise, through the exact study of the heart rhythm. Strophanthin, intravenously, had given remarkable results. However, for the most part the galenicals received attention, rather than alkaloids and other active principles.

The Pathology of Shock

In the Section on Pathology, an interesting discussion was that on the pathology of shock, which was initiated by Prof. Yandell Henderson, of Yale. There were many forms of shock, he said, and opposing observations by independent investigators might be equally true.

Henderson regarded the structural changes, as found by Crile in the cortical ganglion-cells, not as the fundamental element of shock, as did Crile, but as the result of the involved anemia. He considered acapnia a most important element in some forms. His views and Crile's however, were not mutually exclusive.

The speaker referred to three forms of sudden death usually spoken of as owing to shock, namely, death from electricity, anaphylactic shock, and death from grief or fright; and he claimed that the theory of vagus inhibition as the cause was inadequate. It did not involve an abolition of the normal peripheral vascular resistance. It was not a vasomotor failure. Its fundamental conditions were not nervous, but physical. In the discussion that ensued, Dr. Crile insisted upon his kinetic theory of shock. The subject of anaphylaxis also came in for a good deal of discussion, as also did the "anoci-association," in the Section on Anasthetics.

New Work in Bacteriology and Bacteriotherapy

An interesting paper presented in the Section on Bacteriology, was that of Dr. Hofer, of Vienna, who described an organism that he considered to be the cause of ozena, and detailed his reasons for thinking so. After a lively discussion, the general sense of the meeting seemed to be that he had made good his claims.

Dr. Broughton Alcock, of the Pasteur Institute, explained his method of treating infective conditions with injections of living bacilli up to 300 millions, and even more—(streptoccoci, staphylococci, gonococci, etc.) which he had practiced without observing any ill effect. Warnings were entered, however, by Loeffler, Thiele, and several others.

Sir James Crichton Brown, in his presidential address to the Section on Psychiatry, dwelt upon the increase in lunacy and urged

the need of investigation and better methods of hospital treatment. The psychiatric clinic of Baltimore was described by Prof. Adolf Meyer. The Maudsley Hospital, to be erected in London out of Dr. Maudsley's donation of $150,000 to the London County Council for the purpose, it to be based on the American model.

Freud's theory of psychoanalysis, as was to be expected, aroused considerable discussion, Prof. Janet, of Paris, criticizing it with considerable force and acuteness.

Forensic Medicine and Medical History

In the Section on Forensic Medicine, a most important discussion centered about the subject of malingering, which has sprung suddenly into great prominence in England under the Insurance Act. Sir John Collie was the principal reporter, and he laid great stress on the complexity of the mental attitude of workmen with regard to returning to work, as leading to a mode of malingering which, while undoubtedly it was a fictitious stimulation or exaggeration of disease, was nevertheless not a distinctly conscious imposture.

The Section on the History of Medicine was a new one, and it amply justified its existence in its first proceedings. The president, through whose energy it was organized, mainly, was Dr. Norman Moore, a medical scholar of the most distinguished type. Many papers of the utmost interest were read.

The "historical method" is now so firmly established in all other branches of knowledge, as conducing to the elucidation of truth, that its importance as a guide in further investigation in medicine cannot be gainsaid. Indeed, in practice, it is largely resorted to every day, for almost universally the first thing a medical writer does in propounding some new view or method of procedure in any medical subject is, to review briefly the history of the subject so far as it is on record and easily accessible. These qualifications for the most part, however, exist in relation only to very recent history; but it is the function of a systematic study of the history of medicine to carry such researches back into far more removed epochs, whereby much information will be gained from the experience of the past.

A notable instance of this kind occurred in Mr. Nelson Hardy's paper on the history of epidemic mental disorders, wherein he referred to the most celebrated epidemics of former time—the dancing mania among others—and classed modern militant suffragettism among them.

Space does not permit me to do more than refer to the Medical Museum of the Congress in the Imperial College of Science, South Kensington, in which nearly every Section of the Congress was represented; and also to the unique Museum of the History of Medicine, in Wigmore Street, organized by Mr. H. S. Wellcome. There was also an exhibition of surgical appliances, drugs, food, mineral waters, and so on, which was of a distinctly scientific character, and, though naturally prevailingly British, still to some extent international in its representation.

An International Association of Orthopedic Surgeons was instituted during the Congress, the Committee being as follows: Great Britain, Sir Robert Jones; Holland, Prof. Mark Jansen; Italy, Prof Putti; France, Prof. Kirinesson; United States, Prof. Lovett; Germany, Prof. Vulpius; Hungary, Prof. Dollinger; Canada, Prof. Clarence Starr; Russia, Prof. Turner; Austria, Prof. Spitzy (secretary).

The Tutmonda Esperanta Kuracista Asocio (Universal Esperanto Medical Association) held two meetings in the Royal School of Mines, at which several papers on highly technical subjects—such as the alkalinity of the blood, the sounding of the duodenum, and so on—were read and discussed in Esperanto by medical men of several nationalities.

Two interesting tributes were paid during the Congress. Professor Blanchard, of Paris, presented a gold medallion to Sir Patrick Manson, in the Section on Tropical Medicine, for his great discovery of the cause of kala-azar. Also the French members of the Congress, through Dr. Lucas-Championniere, placed a laurel wreath on the bust of the late Lord Lister, made for the Royal College of Surgeons by Sir Thomas Brock, R. A.

The Royal College of Surgeons also took the opportunity of conferring the Fellowship of the College on fifteen distinguished foreign and colonial surgeons, among them being Dr. G. W. Crile of Cleveland, Dr. Harvey Cushing of Baltimore, Dr. W. J. Mayo of Rochester, Minn., and Dr. J. B. Murphy of Chicago.

At the closing meeting of the Congress on August 12, the award of the Congress prizes was announced as follows: The Moscow prize, to Prof. Charles Richet, of Paris, for his work on anaphylaxis. The Paris prize, to Prof. A. V. Wassermann, of Berlin, for his work on experimental therapy and on im-

munity. The Hungary prize, to Sir Almroth Wright, of London, for his work on anaphylaxis.

Munich, 1917, was appointed as the place and time of the next International Medical Congress.

Reminiscences of a Country Doctor

By A. T. CUZNER, M. D., Gilmore, Florida

EDITORIAL NOTE.—Dr. Cuzner is one of the old war horses. He has been fighting with us for a better therapy for a good many years—and he is fighting yet. Long may he be with us to help carry on the battle.

SOME fifty years ago I took up the study of medicine. In this undertaking I was especially favored in having as personal friends, and as tutors, "giants of those days" —Drs. J. Marion Sims, Lewis E. Sayre, Louis Bauer, and J. H. Douglas. Each of these imparted his quota of medical knowledge, and aided me in training for my future life-work.

One-half of my medical experience has been acquired in the South. Here I found certain diseases—common enough in the Northern states—conspicious by their absence. For a number of years I never had to deal with a case of rheumatism or diphtheria.

My first introduction to diseases peculiar to the South was during the epidemic of yellow-fever in Jacksonville, in the year 1888. This disease and typhoid fever are both eminently filth-diseases. The former made its appearance on this continent soon after the conquest and settlement of the West Indies and Mexico, and owed its existence in those countries, I believe, to the introduction of negro slavery. That yellow-fever is a filth-disease, is proven by experience, for we had yellow-fever endemic in all the southern cities where the sanitation was bad and filth prevailed, while since Havana, Panama, and New Orleans have improved their sanitation and cleanliness, this disease has become almost unknown there.

Experience With Yellow-Fever

My own experience was as follows: The first week that yellow-fever was declared epidemic in Jacksonville we were engaged in the cleaning up of the slums of the city. Afterwards I became a member of the staff of the Medical Bureau of Relief. At the close of our service, on a careful analysis of the cases reported and of the deaths that occured, we found these thickly settled slums had the least number of cases and the smallest death rate. My own success with this disease was far above that of the other doctors of the Bureau. They attributed it to my practice of carrying with me a case of medicines and administering the remedies personally. These medicines were not of great bulk, being mainly alkaloids or other active principles. Having established my diagnosis I initiated my treatment with a powder of calomel and podophyllin. Then I wrote a prescription for tincture aconite, acetate of potassium and spirit of nitrous ether; ordering the patient to drink plenty of hot orange-peel tea as I have found this to be an excellent diaphoretic. This practice of carrying and administering my medicines grew on me as time passed.

About the year 1895 my attention was directed by *The Medical World* to a medical publication named THE ALKALOIDAL CLINIC and immediately subscribed for this journal, with the result that I purchased works on alkaloidal medication and supplying myself with a case of granules.

From that time to the present I have mainly depended upon the alkaloid in my treatment of the sick.

Advantages of Active-Principle Therapy

There are good reasons for this practice of mine, as it is that of the many thousands of followers of dosimetry as understood in this country.

In the first place, if we take any medicinal plant and obtain an extract from it, we have a complex mixture, the different ingredients of which it is composed varying in amount, strength, and effect; while in certain instances some of the different principles directly counteract each other.

Secondly, the alkaloids having a definite strength and action, we can so apply our medicine as to obtain definite results. Our diagnosis may be inaccurate, of course, and then, naturally, a wrong remedy may be em-

ployed with consequent insatisfactory results.

Just here I would pause to state that it is not alkaloids alone that are used in "alkaloidal" medication; there are other remedies. Among the latter are found resins, glucosides, concentrations, acids, salts of various metals, extracts, and various chemical combinations and other substances which cannot be classed with those named, such as pepsin, iodoform, nitroglycerin (glonoin) monobromated camphor, and others. These, like the alkaloids, have a definite action that we can always count upon to meet certain well-defined symptoms in disease.

In practice, we need not wait, in our treatment of morbid conditions, for an exact diagnosis; we can administer at once such medicines as clinincal experience has proved best suited to meet present known morbid phenomena. This may be called the symptomatic treatment, and may be continued throughout the course of the disease. The dominant treatment is that which is calculated to either neutralize or to do away with the cause, or causes, of the diseased condition, and the restoration to the normal.

The Importance of Excretion

In the operations of nature, throughout organic life, there is exhibited a uniformity of design which, if understood, will be the means of unraveling many—if not most—of our pathological and agricultural problems. From the lowest forms of life revealed by the microscope to highly developed man—"made a little lower than the angels"—we find that the processes of absorption, secretion, and excretion are common to all. All organic bodies are alive throughout their ultimate cells and electrons. But do not remain so, else we should live on forever. For they perform all the operations of life by virtue of their own inherent, self-contained vitality, and, in thus doing, these cells and electrons loose, in the performance of their particular function, their vitality and die.

In consequence of this death of the cells, there is a continuous accumulation of dead and poisonous material in the organism, and this must be removed. This poisonous material, if not removed, becomes a nidus for the lodgment and development of the germ of disease. Hence, the supreme importance of attention to elimination.

I believe the time has come when the subject of the excretions of the human body will be recognized as second to none in importance. I wrote an agricultural article the other day and sent it to the U. S. Agricultural Department. One of the points I made was this; Plants, as a rule, are distinguished from animals by the fact that they are anchored to the spot for life, where they begin their existence. Excreting, both from leaves and roots, the worn-out and effete material of their structures, the result of their life-work, they very soon have their roots surrounded by decomposing and organic material.

Now, each plant excretes material that is mainly poisonous to its own structure. Hence, we find that successive crops of wheat (or of any other plant) becomes less in amount. The remedy for this, I stated in that article, was a succession of crops of different kinds of plants; giving as a reason that, as chemical analysis showed no loss of plant food, it must be that the wheat-ground having been poisoned by the excretions of the previous wheat-crop; therefore time must be allowed for the decomposition of this poison in the soil, or else some other plant not affected by it must be substituted for the former. Moses understood this when he decreed that "the land shall rest every seventh year."

Now, in the human body, every cell, as it dies, must have the materials of which it is composed removed, or they will act as an irritant to adjacent living cells; hence, we have an excitation set up which we call inflammation, this resulting in an increased flow of blood to that part.

I believe this is the solution of the problem of how serum therapy effects a cure in many diseases. The body-tissues, after a time, gradually tolerate the presence of the germ or its toxins. Hence, the morbid process they were formerly enabled to set up and to continue they are now powerless to effect.

The following, from the pen of Dr. Abbott, I believe to be Simon-pure medical gospel:

"At least two-thirds of all sickness is due to decomposition or fermentation of food-waste in the alimentary canal, as a result of which toxic bodies are formed that set up one disease-condition or another, either locally, by irritating the mucosa, or remotely, through being absorbed into the blood stream and then acting as direct poisons to every body tissue."

WHAT OTHERS ARE DOING

PHENOLPHTHALEIN MAY SIMULATE BLOOD IN FECES

Phenolphthalein, when taken internally, may color the stools in a manner to simulate blood, and a writer in the *Deutsche Medizinische Wochenschrift* warns physicians against this possible deception. Before diagnosing blood, they should first make sure of the absence of chemical discoloration, by questioning or testing. To an ethereal extract of the feces add a few drops of potassa or soda solution; if the ether turns red, add a little acetic acid. Disappearance of the red color indicates phenolphthalein.

This reminds us of the experience of one of our friends, who was called in haste to see a a little patient whose "mouth was all bloody," and who had been taking a phenolphthalein laxative (thalosen). A little inquiry revealed the fact that an alkaline tablet was given before the youngster had finished chewing up the thalosen. Hence, a bad case of useless fright. Remember, when giving phenolphthalein, that in the presence of alkalis it gives a bright-red color.

DISCUSSION OF ALL THE MEDICINAL GLUCOSIDES

Attention is called to a serial article in the *Pharmazeutische Zentralhalle* (beginning in No. 20—May 15, 1913) upon the medicinal glucosides. The author, George Cohn, takes up all the glucosides at present finding employment in medicine, discussing for each the chemical aspects as well as the therapeutic properties. The article is very complete and worth filing by everyone interested in the active principles (more on the chemical side, though), but, unfortunately, too lengthy to admit of translation for these columns.

GLONOIN IN SEASICKNESS

O. Burwinkel recommends (*Wien. Med. Klinik*, 1912, No. 29) the use of glonoin for seasickness, on the theory that this ailment results from spasm of the vessels and consequent anemia of the central nervous system. Burwinkel tried this remedy on himself while on a voyage, and found that the symptoms were quickly alleviated. This relief was only temporary, it is true, and the dose had to be repeated at frequent intervals; still, this can be done with perfect safety.

In this connection it is worth while to call attention to the use of cactoid in the treatment or the prevention of seasickness, as advocated by Dr. S. A. Davis (of the Lambert & Holt Steamship lines), in his communication printed in CLINICAL MEDICINE, page 691 of the August issue. In the exceedingly severe cases he succeeds with hyoscine, morphine and cactoid.

VASOHYPERTENSIN: THE PRINCIPLE OF THE HYPOPHYSIS

Vasohypertensin is the name bestowed by L. Popillski upon the vasoconstrictive principle which he has succeeded in isolating (*Berl. Klin. Woch.*, 1913, p. 1157) from the hypophyseal gland.

DIAGNOSING ACUTE PANCREATITIS

An examination of the tryptic and amylolytic digestion is not sufficient for establishing an acute inflammation of the pancreas, S. Nagy claims in the *Wiener Medizinische Wochenschrift* (1913, No. 9). However, the diagnosis is certain when the splitting of the fat amounts to less than 70 percent.

ALKALI-THERAPY IN SEPSIS

Basing upon the idea that septic processes engender acids in the blood, as also in view of their physiologic action, alkalis in massive doses have been given for years, in the clinic of Dr. Tilmann at Cologne, in all cases of severe pus formation of a septic character; the dose of the sodium bicarbonate being from 10 to 20 Grams; or half as much for children.

The results of this therapy, according to a paper read by Dr. Vorschuetz before the German Society of Surgeons in March (*Muench. Med. Woch.*, 1913, No. 16), have been excellent, and the explanation given is as follows: (1) alkalis act as catalyzers; (2) they

cause retention of the water in the tissues—turgescense, edema; (3) they induce a greater output of urine by the kidneys; (4) they stimulate the secretory glands of the alimentary tract, thus increasing appetite and digestion; (5) they give rise to augmentation of blood pressure.

As long ago as in 1890, Ehrlich expressed the view, based on his experiments with serum, that the bactericidal power of blood depends upon its saline constituents, but Dr. Vorschuetz decided to establish this by direct experiments upon living animals. Consequently, he took healthy rabbits and acidified their blood, and injected 50 Cc. of a 1-10 normal saline solution. Then he injected a definite amount of ricin. The result was, that those animals whose blood had been rendered acid succumbed to a dose of ricin that, under like circumstances, proved harmless to animals whose blood was not acidified and thus was capable of binding and making inocuous the poisonous proteid.

Those of us who have noted the profound disturbances associated with the acidemic state, and the marked improvement following its correction by proper alkaline medication, with sodoxylin, for instance, will appreciate the significance of Vorschuetz's observations.

NEUROLYTIC ACTION OF UNSATURATED FATTY ACIDS

Experiments with cats have demonstrated, according to H. M. Adler (*Arch. of Int. Med.*, 1913, No. 2), that unsaturated fatty acids exert a lytic action upon neural tissue. This neurolysis seems to depend upon the same factors that lead to hemolysis. May there not be here a hint in support and explanation of Dr. C. S. Pixley's assertion—that rancid cottonseed-oil gives rise to pellagra? (See 1911, p. 884.)

PURIFIED DRINKING-WATER

The *Bulletin* of the Chicago Department of Health gives the following simple directions for applying the hypochlorite method of purification of drinking-water for family or personal use:

Get a few ounces of the best quality of chloride of lime at any drugstore and prepare the following:

Stock Solution

Chloride of lime.....1 teaspoonful
Water.....1 quart

Keep this solution in a tightly stoppered bottle; a Mason jar or a thermos bottle being well adapted for the purposes, the latter especially when one is traveling.

Label the bottle "Stock Solution;" show the formula as above, and add the following directions:

"To purify water for drinking-purposes, add 1 teaspoonful of the stock-solution to 2 gallons of water."

If the water is turbid, strain it through fine muslin before adding any of the stock solution.

After adding stock solution allow the water prepared for drinking-purposes to stand *uncovered* for twenty minutes before using. This allows the gases to escape and makes the water more palatable.

RADIOGRAPHERS' MALADY: A NEW DISEASE

Scarcely has wireless telegraphy become a commercial reality, than "wireless-operators' disease" is announced as a new occupation-disease—at least that is the way *The Literary Digest* puts it in its citation of its German authority, *Elektrochemische Zeitschrift*. Since neither "wireless operator" nor "wireless disease" is a thinkable entity, we prefer to call the new disorder radiographers' malady. It is believed that the powerful electric waves involved and the accompanying ozone are at least the principal causative factor of the trouble; but other conditions contribute. In general, there is marked anemia, accompanied by headache, indigestion, loss of appetite, paleness. Similar disturbances have been observed in those working in high-tension plants, as at Niagara Falls.

SEXUAL PERIODICITY IN MEN

For many years it has been observed that some men present monthly cycles of sexual activity corresponding to the period of menstruation in women. C. P. Obendorff (*Med. Rec.*, July 5) cites several interesting cases of this kind which he himself has observed.

The first described is that of an Englishman, a man of 29, who experiences strong erotic cravings once a month, "at the time of the full moon;" during the rest of the month his sexual desires are very mild, indeed. However, when his "monthly period" is on, his sexual desires are almost uncontrollable, so that he has made it a practice to avoid women at this time, for fear of doing something indiscreet. Once, during one of these periods, he was committed for a short time to an insane asylum.

The second case is that of a man of thirty, who presents one strongly marked feminine characteristic, namely, a well-rounded and slightly pendulous left breast. His genital organs are normal. This man also has made the observation that his sexual desires are strong only once a month.

The third individual reported by Oberndorff also presents feminine characteristics, and was the passive agent in pederastic practices with two of his brothers when he was younger. He has masturbated since he was five years of age, being now twenty-nine. He is strongly homosexual. When nineteen, this patient first noticed that his sexual desires were strongest at the full moon, and recurred every twenty-eight days.

In all three cases, it will be observed, there are more or less strongly marked feminine characteristics.

HOW TO PREVENT ANAPHYLAXIS

Besredka, of the Pasteur Institute, Paris, has made some interesting studies anent the possibility of producing anaphylaxis, that is, of preventing the disagreeable and sometimes dangerous symptoms of serum poisoning following the administration of a second or third dose of a therapeutic serum. These experiments were described at the International Medical Congress, held in London, and published in *The Lancet* (Aug. 16, 1913, p. 462).

In experimenting upon animals, he found that by introducing into the body of an animal a small dose of the serum to be employed some time before the larger dose was injected, he could prevent the development of the toxic symptoms, even when the full dose would ordinarily be sufficient to cause death. He applies the same principles and the same methods to the serum treatment of diseases in human patients.

The interval necessary between the small and the larger doses, in order to prevent the anaphylactic symptoms, depends upon the route employed. If the remedy is given intravenously, ten to fifteen minutes suffice; if intraspinously, two hours, and, if subcutaneously, four hours. Assuming a hypothetical case, by way of illustration, Dr. Besredka describes the method of treatment as follows:

"It is dictated entirely by the condition of the patient. Let us consider a case of cerebrospinal meningitis, for it is in such cases that we are most likely to have accidents. We are called to a patient with meningitic symptoms, but the diagnosis is doubtful, and injection is usually put off till tomorrow. In such a case, do not leave without injecting 10 to 20 Cc. subcutaneously. It will not make the patient worse; on the other hand, if you decide on lumbar puncture the next day, the patient will get full benefit, for he will be already vaccinated against anaphylaxis and will be able to support immediately and easily 20 to 25 Cc. in the spinal canal.

"Take another case, occurring in the middle of an epidemic of cerebrospinal meningitis, but the diagnosis is not doubtful. A spinal injection of 20 to 30 Cc. is decided upon. If it is not a very urgent case, it is better to commence with an injection of 2 Cc., to let two hours pass at least, and then to inject the purposed 20 to 30 Cc. If the case is so urgent that each hour's delay brings, in the physician's opinion, added risk to the patient, the venous route should be employed. The serum should be diluted, say, 5 Cc. in ten times its volume of physiological water. Of this, 1 Cc. should be injected into the basilic vein; four minutes later 3 Cc. of the same fluid may be injected; two minutes later, 10 Cc.; after an interval of two minutes a final injection of 25 Cc. may be given.

"The patient can now be considered as vaccinated against anaphylactic risks. Clinical practice has demonstrated that he can receive ten minutes later an injection, intravenous or interspinal, of 10, 20 or 30 Cc. of pure, undiluted serum. These examples will enable the clinician to decide what method of antianaphylactic vaccination should be enployed in each particular case."

The same general method will apply in diphtheria, except that spinal injections would not be employed.

BACTERIN TREATMENT OF TYPHOID FEVER

Delearde and Leborgne (*La Province Médicale*, June 21, 1913, p. 273), tell of their experience, in the treatment with vaccine, of a number of cases of typhoid fever occurring in children. Ten cases are reported upon, 6 of these subjects having been vaccinated and the other 4 not. The patients all came from a locality visited by an epidemic of this disease, and where the mortality had been unusually high. Injections generally were made at five-day intervals, in doses suited to the age of the patient.

These cases are described in detail, the results obtained being about as follows: The

number of persons vaccinated was 6; the number not vaccinated, 4. Of those vaccinated, 2 died, while 1 died of those not vaccinated. There were 2 relapses among the vaccinated patients, and 2 relapses among those not vaccinated. Besredka's vaccine was employed.

The authors conclude that, in spite of the favorable results obtained by Ardin-Delteil, it did not appear at present that the vaccination method of treatment would replace the classical methods of dealing with this disease.

On the whole, this report seems generally supportive of the American position that, while typhoid bacterins are of great benefit in the treatment of typhoid fever, the greatest field of usefulness lies in the prevention of the disease.

RHINOPHYMA CURED WITH RADIUM

Radiotherapy has been successfully employed by Dr. Degrais, of Paris, in 3 cases of rhinophyma, 2 of these of the glandular type. Dr. Degrais (Congress for Physiotherapy: *Wien. Med. Woch.*, 1913, No. 16) applied the radium sulphate four times, each treatment of twelve hours' duration, and obtained very satisfactory diminution of the enlarged nasal organ and retrogression of the glands.

URINE EXAMINATIONS IN GONORRHEA

F. H. Pickin (*Lancet*, July 12, 1913, p. 76), employs a 2-glass test of the urine in the acute stage of gonorrhea, to locate the extent of the mischief and the effect of treatment. The patient is instructed to pass from 4 to 5 ounces of urine into one glass, and the remainder into the second glass. The deductions to be drawn are tabulated as follows:

Glass 1	Glass 2	Deduction
Turbid	Clear and bright	Acute anterior urethritis.
Turbid	Turbid; becomes clear on addition of acetic acid.	Acute anterior urethritis and phosphaturia.
Turbid	Hazy and turbid (but less than in Glass 1); not cleared by acetic acid.	Acute anterior and posterior urethritis.
Turbid	Turbid. (The turbidity equal to or greater than Glass 1.)	Acute anterior and posterior urethritis and cystitis.

This test is applied in chronic cases of gonorrhea and gleet as follows:

First the anterior urethra is washed out with weak boric-acid solution, the washings being collected in a small glass; a glass syringe with backflow being employed. Having set aside the washings collected in this glass, the patient is directed to pass his urine into two glasses, as in the acute cases. An examination of these three glasses gives valuable information concerning the location of the trouble and the effectiveness of the treatment. The following tabulates this information:

Anterior Urethral Washings	Urine Glass 1	Urine Glass 2	Deduction
Turbid	Turbid or hazy	Clear or slightly hazy	Anterior and posterior urethra affected. Bladder free.
Turbid	Turbid.	Turbid. (Not cleared by acetic acid.)	Anterior and posterior urethra affected. Bladder affected. Examine for mixed infection.
Turbid	Turbid or hazy. Partly cleared by acetic acid.	Turbid. (Cleared by acetic acid.)	Anterior and posterior urethra affected, also phosphaturia.
Turbid or hazy, with shreds and flakes	Clear; no shreds or flakes	Clear	Anterior urethra alone affected. Examine for early stricture.
Turbid or hazy, with shreds or flakes	Hazy or clear, with shreds or flakes	Clear	Anterior and posterior urethra affected.
Clear; no shreds and no flakes	Hazy or clear with shreds or flakes	Clear	Posterior urethra only affected. Examine prostate.
Hazy, with flakes or shreds	Hazy, with many flakes or shreds	Less hazy, with few flakes or shreds	Anterior and posterior urethra affected. Look for mixed infection.

ANTISTREPTOCOCCUS SERUM

We gather from an article by George H. Weaver, in *The Journal of the American Medical Association* (Aug. 30, 1913, p. 661), that it is not clear just how antistreptococcus serum acts. It certainly, he points out, contains opsonins and perhaps other antistreptococcic bodies, but nothing is definitely known as to the part played by a true antitoxin, if any exists, in antistreptococcic immunity. A favorable course of a streptococcus infection in man, after the administration of this serum, usually is accompanied by falling temperature, improvement in the local and general toxic conditions, reduction of the leukocytes in the peripheral blood, and a rise in the opsonic index. There may also be an increased phagocytic activity of the leukocytes. Very likely there is also some antitoxic process.

To secure the best results with this serum, it should be brought in contact with the infecting bacteria as rapidly as possible, and this is best done by intravenous injection. However, if the condition is less urgent, the serum may be introduced intramuscularly or subcutaneously, the former being the method of choice when intravenous injection is impossible or contraindicated.

Ordinarily from 30 to 100 Cc. should be administered at one time. The full effect

is obtained almost at once if the serum is given intravenously; in a few hours, if injected intramuscularly; but only after twenty-four to forty-eight hours, if given subcutaneously. The dose should be repeated if the symptoms recur or if improvement comes to a standstill. A fall of the opsonic index after twenty-four to thirty hours, following an earlier rise, would point to the need of repeating the injection even in the presence of apparent improvement.

Dr. Weaver speaks highly of the local use of antistreptococcic serum in local infections. He asserts that this method of treatment is not as yet as generally employed as it deserves to be. To emphasize this last idea, we may suggest, for instance, that one of our most efficient remedies in the treatment of puerperal streptococcic infections is, to swab out the uterine cavity with that serum. This serum should also be applied to open infected streptococcus wounds, wherever they may be located. It certainly should be indicated in the streptococcus sore-throats which have been epidemic in some quarters during the last two or three winters.

THE IDEAL ANESTHETIC, AND HYOSCINE

Harvey Cushing, in his Address in Surgery, at the International Congress of Medicine held in London, makes the following interesting statement:

"Experimental therapeutics will in time doubtless give us the ideal anesthetic, in the form of a drug possibly allied to chloretone or scopolamine, a single injection of which will induce a prolonged sensitive sleep, perchance of long enough duration for primary wound healing to occur. Then will the surgeon's sense of responsibility, whether in laboratory or clinic, be greatly lightened, for undoubtedly today inhalation-anesthesia itself gives him his chief anxiety, and his patients, whether animal or man, their chief discomforts."

Let no reader of Clinical Medicine lose sight of the important fact that *hyoscine* is at last coming into its own among the great surgeons of the world. The sedulous care with which the term "scoplamine" is being employed in some quarters only intensifies the truth—which Crile's studies in anoci-association make all the more striking—that in this alkaloid we have one of the most important remedies for the relief of suffering and the salvation of life.

The combination of hyoscine and morphine is being justified, not alone in the work of our great surgeons, but in the varied experience of thousands of competent general practitioners. It may not be the ideal anesthetic for which Dr. Cushing prays, but it represents a long step toward that ideal.

PELLAGRA IN ENGLAND

The number of *The British Medical Journal* for July 5, 1913, contains articles by Box, Mott, Sambon, and Hammond, discussing several cases of pellagra which have been found in Great Britain, the disease now being known to be occasionally present as far north as Scotland and as far south as the Isle of Wight, although until recently it was not supposed to occur in England at all.

Sambon, in an exhaustive paper, presents an extended argument to show that the disease is transmitted by the bite of a fly, the simulium reptans. In this connection, we may call attention to an article by Jennings and King, of the Bureau of Entomology, U. S. Department of Agriculture printed in *The American Journal of Medical Sciences* (Sept. 1913, p. 411), in which a careful study is made of insects as a factor in pellagra. These authors come to the conclusion that the simulium (buffalo-gnat) must be eliminated as an etiologic factor in this country. However, the stable-fly (stomoxys calcitrans) may, they believe, be an important means for the transmission of the disease.

AMEBIC DYSENTERY, AND EMETINE

Another case of amebic dysentery treated with emetine is reported by H. L. McNeil in the August number of *The Texas State Journal of Medicine* (p. 137). The case was that of a negro who had been troubled with continuous diarrheal discharges extending over two years. Although he was treated in two hospitals, the discharges had never been arrested for more than two days at a time.

When the patient was admitted to the hospital he was having fifteen to twenty fluid stools per day, these containing some blood and mucus. No amebæ were found in the first stool examined. The patient was put upon the usual treatment for diarrhea, and an examination was again made some days later, following the use of the rectal tube, and two amebæ filled with red blood-cells were discovered.

Then the patient was immediately given a hypodermic injection of ½ grain emetine

hydrochloride, followed by ¾ grain of the drug the following day. On the third day after the emetine treatment was begun, the patient had only one stool, semisolid, and he volunteered the statement that he felt better than he had for two years. He was given two more emetine injections during the following week, and never again had more than one stool per day up to the time he was discharged. He claimed that this was the first time since the trouble had started, two years before, that he had had a solid stool.

HOW TO PREPARE RENNET-WHEY

Dr. Engel gives the following directions (*Deut. Med. Woch.*, 1913, p. 1252) for preparing rennet-whey, or, as Germans call it, "eiweiss milch."

Boil the milk, cool to 40° or 42° C., add rennet tablets (first allowed to disintegrate in a little water), stir well, let stand half an hour, again warm to 40 or 42 degrees, at about which time coagulation of the casein will set in. Watch carefully for this point, pouring some of the milk slowly, in a thin layer, from a tablespoon. The appearance of fine granulations indicates the setting in of action of the ferment, and the milk from now on must be stirred gently until separation is complete; which is only a few minutes, and the casein should appear in floccules, very finely divided.

In case the reaction is retarded, then once more warm the milk, as before, to hasten coagulation. To the milk thus prepared, add an equal volume of water, previously boiled, and set aside. In half an hour, pour off the upper half of the liquid and place on ice. The lower half, containing nearly all the casein as a sediment is rejected. This preparation has approximately this composition: Albumin, 27 to 31; fat, 21 to 34; lactose, 30; ash, 4.5; calcium oxide, 1.4, in Grams per liter.

ALLANTOIN AS A LEUKOCYTE STIMULANT

A solution of allantoin, consisting of 10 centigrams of finely powdered drug suspended in 5 Cc. of water, was injected intraperitoneally in guinea-pigs by Berthelot and Bertrand (see *Comptes Rendu, Soc. Biol.*, vol. 73, p. 263), and it was found to increase the local resistance to infection by the cholera vibriones and typhoid bacillus. This favorable action was found to be due to the stimulant action of leukocytosis. The others conclude that the action of allantoin in promoting cicatrization results, in part at least, from its favorable action upon phagocytosis.

SALVARSAN IN YAWS

Salvarsan is now being employed in a number of other diseases besides syphilis; for instance, excellent results have attended its use in amebic dysentery, in relapsing fever, and pernicious anemia. One of its greatest triumphs has been in the treatment of frambesia, or yaws, which is also caused by the spirochete.

Ehrlich, in his address before the International Congress of Medicine in London (reported in *The Lancet*, Aug. 16), says that in Surinam a hospital, in which over 300 patients with frambesia were constantly under treatment, was closed and turned to other uses after the introduction of the salvarsan treatment, as one single injection sufficed to cure the disease, and the patients could all be discharged, but two. It is to be hoped that in this way it will be possible to extirpate frambesia altogether.

Exactly the same favorable results have been attained with recurring fever in the human subject, the fever immediately subsiding after the injection of salvarsan, and the patients being cured by one injection.

ARE LECITHIN AND CEPHALIN OF VALUE IN PARALYSIS?

Some noteworthy studies of the chemistry of the brain, especially as regards the presence of phosphorus-containing bodies, have recently been made by Ernst Salkowski (*Biochem. Zeitschr.*, 1913, p. 407). His work, and other recent studies upon this subject, are embodied in an editorial in *The Journal of the American Medical Association* (Aug. 23, 1913, p. 603), from which we reproduce the following:

"It has long been believed that some of the diseases of the central nervous system, particularly those in which anatomic lesions or alterations are known to occur, are attended by changes in the chemical makeup of the tissue. Owing to the technical difficulties in the analysis of nervous matter, the proof has not easily been furnished. Not long ago Carbone and Pighini asserted that in the brain of individuals dying of progressive paralysis the proportion of one of the brain phosphatids, cephalin, is markedly reduced. This announcement promptly awakened the hope of a corresponding therapy of nervous disease.

"Several years ago Franchini attempted to 'enrich' tissues in lecithin by the administration of lecithin. He employed the product prepared from egg-yolk and believed that he could actually demonstrate a deposition of this lipoid in the liver. In the case of the brain, however, no evidence of any increase in phosphatids could be discovered as the result of furnishing egg-lecithin to the body. Frankel contends that the human brain does not contain the ordinary lecithin, but a phosphatid of different type—a triaminodiphosphatid, which he has named 'sahidin.'

"In view of the differences in the results of experimental feeding suggested by the specific peculiarities of the species, Salkowski, the well-known pathologic chemist of Berlin, has been impelled to repeat the experiments on phosphatid administration, using the closely related cephalin in place of lecithin. The outcome of his trials with animals has been, that cephalin—already an article of commerce—is well tolerated and apparently readily absorbed. In contrast with what Franchini reported for lecithin, cephalin was not deposited in the liver, but was said to become stored in the brain.

"When one examines Salkowski's data critically, however, they bring little conviction. The actual increment of phosphatid found by him—and that in only a very limited number of experiments—is so small as almost to fall within the limits of experimental error in such kinds of investigations. Salkowski argues that in a tissue which resists alterations in its chemical makeup as stubbornly as does the brain, the increment of even 5 percent of any component (the figure recorded for his cephalin trials) is noteworthy. He therefore suggests that his experiments justify the attempt to employ the otherwise harmless cephalin in progressive paralysis and other cerebral affections."

The Journal makes these investigations the text for a lecture upon the inpetus which will be given to the commercializing of lecithin therapy by these investigations. It believes that Salkowski's observations will be used by the not too scrupulous "nostrum vender" to reap a harvest among those who are endeavoring to give relief in certain classes of diseases now generally considered wellnigh hopeless.

Admitting the undesirability, indeed the danger of holding out unwarranted hopes of benefit to be obtained from remedies of this class, there certainly is every reason why practitioners should give lecithin and cephalin a careful trial whenever there is any hope of benefit to be obtained from them. As Franchini shows, probably no benefit could be expected to result from the use of lecithin made from egg-yolk. On the other hand, nerve-lecithin derived from brain-tissue is deserving a careful trial in every instance of this kind, especially since it is known that this form of lecithin is really a mixture of true lecithin and cephalin.

We urge the readers of this journal to investigate this remedy in all cases of beginning paralysis of central origin. If, as Salkowski believes, the remedy has a reconstructive action on brain-tissue, it should also be of value in practically every case of neurasthenia and postoperative shock, in which, according to Crile, there is brain-cell degeneration, as a result of the exhaustion or explosion of brain-energy.

ORGANIC PHOSPHORUS SHOULD BE USED IN THERAPY

M. S. Maslov, in an article in the *Petersberger Medizinsche Zeitung* (see *Chemical Abstracts*, 1913, 2759), reports a series of experiments made upon dogs to determine the therapeutic efficiency of different forms of phosphorus. Maslov came to the conclusion that the animals were incapable of synthetizing inorganic phosphorus compounds. He is of the opinion that phosphorus should not be given for therapeutic purposes. For remedial action, the organic preparations are preferred, and the administration of lechithin is advised when this element is indicated.

THE TREATMENT OF ERYSIPELAS

There appears an interesting editorial upon the subject named in the title in the July 16 number of *The New York Medical Journal* (p. 189). As regards the newer local measures recommended in recent years, the editor points out that those in which heat is the predominant factor seem to have held their own. Hot compresses of saline solution frequently renewed (Pontano) as also the hot-air douche applied from one-half to one hour two or three times a day (Ritter) have given good results—probably by increasing the efficiency of the lymphatic antibodies. Buttermilk applied with soft compresses kept constantly wet has recently been extolled by Arnold. Of other applications, an ointment composed of chlorinated lime, 1 part, and paraffin ointment, 9 parts, is urgently advocated by Binz. One of the older remedies, pure alcohol (a powerful antiseptic), has

recently gained many adherents. Magnesium sulphate in saturated solution has been highly praised, owing to its ability to control pain, decrease the local hyperthermia, and prevent extension of the morbid process.

The physician should not lose sight of the value of some of the newer remedies, notably the streptococcus bacterin and the antistreptococci serum, both of which are indicated; the latter particularly in very severe cases. Internally, the tincture of ferric chloride still holds its own in asthenic conditions, while readers of this journal certainly will not forget the value of calcium sulphide, which should be given in every instance to complete saturation.

BACTERIN TREATMENT OF ACNE VULGARIS

Dr. Philip H. Kreuscher (*Surgical Clinics* of John B. Murphy, Aug. 1913, p. 549) gives the following principles as underlying the successful treatment of acne vulgaris:

1. The determination and isolation of the causative organisms.
2. The knowledge and experience necessary for the determination of the dosage and the interval between inoculations.
3. The general condition of the patient and the degree of virulency of the infective organism.

In 15 cases of acne vulgaris treated in the Murphy Clinic, staphylococcus albus was found in 90 percent. Kreuscher says that theoretically the acne bacillus should always be present, but remarks that probably it was overlooked because of the difficulty of growing this organism, and this difficulty probably explains the unsuccessful attempts of treating the disease with autogenous bacterins.

Perhaps we ma suggest that it also indicates the desirability of using reliable stock bacterins containing the acne bacillus and the staphylococcus albus.

Another reason for failure, declares Dr. Kreuscher, is the fact that the dosage of the acne bacillus vaccine has been too large. He also believes that the physician should watch and modify the coagulability of the blood. If this is too rapid, the patient should receive large doses of sodium citrate; on the other hand, if it is too slow and the patient does not improve immediately, it is necessary to give 10-grain doses of calcium lactate.

In two of the cases reported, Dr. Kreuscher states, all lesions subsided after three or four injections, and have not returned. Some of the patients improved rapidly after the fifth or sixth injection; only one was not improved at all.

ROUTINE USE OF TETANUS ANTITOXIN IN WOUNDS

Dr. Philip H. Kreuscher, writing in *The Surgical Clinics* of Dr. John B. Murphy, (Aug. 1913, p. 548), states that it is Dr. Murphy's practice to give tetanus antitoxin in all cases of injury or gunshot wounds in which there is an open lacerated wound inflicted by machinery or implements which have been in contact with the dust or dirt. This is the routine practice at the Murphy Clinic and has been followed in a series of over 150 cases. So effective has been the prophylactic action of the serum that Dr. Murphy has not seen a case of tetanus originate among these hospital-patients in seven years.

The usual dose given is 1500 units; the serum being given therapeutically when occasion arises. Dr. Kreuscher has had occasion to see in a distant city a tetanus patient in whom the symptoms developed nineteen days after the primary infection. Repeated injections of the serum were given, whereupon the more violent symptoms subsided. The patient had no muscular twitching for ninety-six hours before his death.

It may be added that it is now the general practice among all surgeons of standing to administer tetanus antitoxin prophylactically whenever a wound has come into contact with dust or dirt. Thus used, it can be depended upon to prevent absolutely the subsequent occurrence of this usually fatal complication.

AMEBIC DYSENTERY TREATED WITH SALVARSAN

Wadhams and Hill report to *The Journal of the American Medical Association* (Aug. 9, 1913, p. 385), their experience with three cases of amebic dysentery (in two of which the Wassermann reaction was negative, while in the other it was positive), in which the presence of the ameba of dysentery was demonstrated. Following an injection of salvarsan, these parasites disappeared from the stools, with complete relief from clinical symptoms. The authors state that, while these three cases prove nothing, the results are so striking that they believe them worthy of report.

In view of the remarkable effects following the use of emetine hydrochloride in this dis-

ease (a drug which is nontoxic and free from danger), it is hardly likely that salvarsan will ever become a popular remedy for this form of dysentery, although it is not improbable cases will be found which resist the emetine treatment, and where it will be worthy of a trial.

BACTERIN TREATMENT OF HAY-FEVER

In an editorial in a recent number of CLINICAL MEDICINE, we advised our physician friends to experiment with autogenous bacterins in the treatment of troublesome cases of hay-fever; of course in association with the indicated medicinal remedies.

We find support for our advice in an article by Dr. Philip H. Kreuscher, cited, in another place, in the Surgical Clinics of Dr. John B. Murphy (Aug. 1913, p. 551). He says: "Last August we treated three cases of hay-fever with a mixed stock vaccine containing for the most part the streptococcus. Two of these cases did not find it necessary to change climate during the hay-fever season, as had been their custom for many years."

BACTERIN IN JOINT INFECTIONS

The largest and best field for biologic therapy, according to the experience at the Murphy Clinic, as reported by Kreuscher (*Surgical Clinics* of John B. Murphy, Aug. 1913, p. 553), lies in the treatment of the acute and chronic joint infections. However, it is the field in which it is the most difficult to procure cultures for the making of vaccines or bacterins, for these reasons: (1) the large number of atria of infection; (2) the various types of organisms causing the arthritic troubles; (3) some patients had their primary infection twenty or thirty years before presen ing themselves for treatment; (4) it is often impossible to obtain a culture, even from the b ood, which can be used in the preparation of a bacterin.

Three classes of cases are described by Kreuscher:

1. A type presenting gradual and insidious onset, from which no organism can be obtained from the joints, blood stream, secretions or excretions.

2. A chronic type, with infection originating in the mouth, pharynx, tonsils, respiratory tract or intestinal tract, in which a specific organism cannot be found, but which yield to mixed bcaterins.

3. A type, either acute or chronic, in which it is possible to isolate a distinct organism or organisms which is believed to be the cause of the trouble.

The first class of patients obviously is the most difficult to treat and yields the least satisfactory results; however, very favorable results are occasionally obtained. Kreuscher says that the pyocyaneus bacterin has proven quite satisfactory in many of these cases of rheumatoid arthritis.

In the second class of cases, there is usually a history of a more acute onset, characterized by chill, rise of temperature, pain and swelling of the joint, and partial or total incapacity. Several joints often are affected; many of these cases of a chronic type dating back many years. The majority originally had some type of nose or throat infection; a smaller number had infections of the genitourinary tract, of the alveolar process, of the gastrointestinal canal, the respiratory tract, or, also, furunculosis or other lesions of the skin.

Good results were obtained in this class of cases with mixed vaccines containing the staphylococcus streptococcus, colon bacillus, and pneumococcus [This is the general type of the van Cott combined bacterin.—ED.], pneumococci predominating when the infection originates in the respiratory tract; the colon bacillus when it originates in the gastrointestinal or biliary passages. Dr. Kreuscher says, when a severe action follows the administration of a vaccine of this type, we can feel quite sure that the proper organism has been chosen.

In the third class of cases, those in which a definite organism can be secured, whether of an acute or chronic type, Kreuscher avers they can reasonably hope to get good results. Several cases are described in detail.

He claims that through this line of treatment in the Murphy Clinic they have had splendid results in patients who were totally incapacitated and almost hopelessly deformed, showing that many of these individuals may be taken from the "scrapheap" and restored to usefulness. The profession has been self-satisfied in making a diagnosis of "rheumatoid arthritis" and turning the poor victim over to the fates. It is time, he asserts, that some effort was made in a therapeutic line.

[All too many have looked upon the serums and bacterins as "specific." They are rarely so. The rather, they are adjuncts to other, selected therapeutic measures and as such, properly selected and applied, they are a great help.—ED.]

MISCELLANEOUS ARTICLES

How Can I Increase My Income?

WHEN we announced, in August, that we were arranging a series of articles upon the business needs of the physician, we felt uncertain as to how the plan would be received—doctors are so notoriously careless about their own finances. Consequently, we have been pleased to receive a large number of letters from correspondents, generally approving the idea. In one of these, published elsewhere in this number, a Virginia doctor now 67 years of age, tells us that, with the exception of a few years when he was in the Indian service and received a $1000-salary, his income has rarely exceeded $600 annually, and much of the time has been around $300 or $400.

This gentleman is a well-educated man, whose letters show him to be intellectually above the average; he is a graduate of the University of Pennsylvania; and he had the benefit of a hospital interneship following the receipt of his medical degree. He is not complaining—indeed, he has had his share of blessings, and tells us so.

However, the very fact that good doctors and good men are compelled to skimp their way through life on such pittances shows the necessity of a thorough business shakeup in our profession. The doctor cannot do his best work when he is deprived of the means to buy books, take magazines, attend the societies, take postgraduate courses—to say nothing of having relief from the constant anxiety as to how he shall manage to eat, drink, and be clothed.

It is because we believe that the problem of the doctor's income is vitally important to most of us that we have opened up the question in these pages. Following we give the titles of a few papers already promised.

"Bettering the Doctor Himself." By Maynard A. Austin, M. D., Anderson, Indiana.

"Medical Partnerships—an Experience in Successful Cooperative Practice." By F. E. Walker, M. D., Hot Springs, South Dakota.

"Equipping the Doctor's Office for Better Work: A Symposium." Conducted by Alfred S. Burdick, M. D., Chicago, Illinois.

"Refraction Work for the General Practioner." By Thomas G. Atkinson, M. D., Chicago, Illinois.

"The Country Surgeon's Equipment." By Ralph St. J. Perry, M. D., Farmington, Minnesota.

"Making Good in Emergencies." By George H. Candler, M. D., Chicago, Illinois.

"Emergency Surgery in the Country." By Ralph St. J. Perry, M. D., Farmington, Minnesota.

"The Surgery of Chronic Conditions." By Ralph St. J. Perry, Farmington, Minnesota.

"Making Good Medically in Chronic Conditions." By George H. Candler, M. D.

"Electrotherapeutics as an Aid to Financial Success." By H. C. Bennett, M. D., Lima, Ohio.

"The Private Hospital as a Means to Success." A Symposium.

"Ethical Publicity for the Doctor." By Henry B. Hollen, M. D., Chicago, Illinois.

"Keeping Accounts and Collecting Fees." By Henry B. Hollen, M. D., Chicago, Illinois.

Other articles are being arranged for this series. Also, every reader of CLINICAL MEDICINE is invited to participate, either by contributing reports of actual business experience, by suggesting topics for discussion, or by letters of advice or criticism.

It is not to be expected that we, in our editorial office, however closely we may keep in touch with the men on the firing line, can know all the needs of the field. We intend that this series shall be a veritable clearing house of experience and suggestion for mutual profit.

The main thing is, that every contribu tion should be of a really practical nature. While a certain amount of discussion of principles is necessary, we want to get right into the inner heart of every doctor's troubles, and that means the giving of details. So we are asking everyone to tell just what books, journals, instruments, equipment, furniture,

preparation, instruction, and *money* are required in every instance to attain the object aimed at.

THE TREATMENT OF SEASICKNESS: "MAN OVERBOARD"

It seems almost impossible that a sea-journey of some 6000 miles, such as I have just made as surgeon on a steamship running between New York and Buenos Ayres, could be experienced with only two occasions for the exhibition of remedies for sea-sickness, yet such is the fact. And this is not an exceptional condition of things but the usual history. Cactoid continues to be efficient in the early stages, as previously noted, but care must be observed to eliminate cases of early and usually unrecognized pregnancies, and those with chronic fecal accumulations.

On the outward voyage there were six patients in the apathetic state of mind that usually presages retractivity, when the cry of "man overboard!" made further medication unnecessary and provided the mental shock that promptly restored the sufferers to normal.

But this event, though it finished the need for cactoid opened the way for the employment of hyoscine, morphine and cactoid to excellent purpose. The man who went over the side was a fireman, evidently suffering from alcoholic mania. The maneuvers customary in such cases were promptly effected, the man was pulled into the boat, mechanically restrained and brought on board. He was delirious, not incoherent but had delusions and to prevent another attempt to go overboard was put in the steamer's hospital and restraint continued.

One full dose of hyoscine, morphine and catoid was given by the hypodermic route and was calmative in a few minutes. An active cathartic was also given. The next day the hyoscine, morphine and cactoid was given once and on the morning of the third day the patient had fully recovered his balance, but had no recollection of events since leaving port. He at once took up his work and had no relapse.

S. Austin Davis, M. D.

Brooklyn, N. Y.

[In The American Journal of Clinical Medicine, in August, Dr. Davis (who runs between South America and New York on the Lampert and Holt Line) reported excellent results in the control of the mild cases of sea-sickness and in the early stages of this distressing ailment through the use of cactoid. The severe cases he brings under control quickly through the use of hyoscine, morphine and cactoid. In the interesting letter printed herewith he gives another use for the latter remedy. Hyoscine, morphine and cactoid is a winner almost everywhere.—Ed.]

LET US GET RIGHT DOWN TO BUSINESS

Your editorial in the August number, "Let us get right down to business," appeals to me. Having been in active practice for now more than fifty-seven years, some few words on my experience may not be amiss.

First, while I always have been a conscientious doctor and not branched out into any specialty, I have been a business man and have conducted my work on a business basis, believing that the laborer is worthy of his hire. Nor has this line of success been purchased by deviating from ethical standards; for not only am I, as a religious man, a devout believer, but, as a man, my ethical conduct has been strict, and I have been rewarded with every honor the professional brethren of my state could give me.

Prior to the War I lived in middle Alabama, and in those times much of the practice was on large plantations, where the master was responsible, so that there seldom were any bad debts, except such as might be contracted in any little town. Coming out of the Confederate Army with one dollar cash and a mule, I settled in the little town of Gainesville, Alabama, and here I lived for eighteen years. During all those years of the reconstruction time, with all its horror, till 1890—and this in an impoverished country—I collected $72.28 out of every $100 that went on my books during the eighteen years. I was indulgent when necessary, and never hard; but my patrons understood by business methods and stood by me when attempts at underbidding for services were made by competitors.

When on May 29, 1883, I came to Birmingham—now a flourishing city of 180,000 people, but then in its swaddling clothes with a population of only 9000—a perfect stranger, the same plan was steadily pursued from the outset; but if strict business methods have taken from me any patronage worth retaining, I do not know it. Thus far this month $13 only has been credited, all the rest was cash.

I believe that, notwithstanding severe competition, any honest man whose practice is worth retaining will respect more, and the more readily pay, the doctor who conducts his work on strict business plans.

E. H. Sholl.

Birmingham, Ala.

[We agree with Dr. Sholl—the physician who is scrupulously exact and painstakingly conscientious in his business relations is always respected more than the one who lets things slide. People generally take us at our estimate of ourselves. If we do not think our services worth a fair price, and then insist upon getting that price, we shall always be hard up. We purpose to develop more interest in this matter of charges and collections. We want every successful man to tell us his methods—not in a too general way, but in detail. Who will come forward?—Ed.]

SEPTIC ARTHRITIS: BACTERIN TREATMENT

When one encounters a child with an otherwise normal bill of health, giving a history of scarlatina, measles, tonsillitis, and perhaps also mumps, and presenting well-marked septic endocarditis and arthritis, it is a pretty safe guess that one has to do with a streptococcic infection derived from one or all of the diseases mentioned. The more I see the after-clap of these exanthemata (and I see a great deal of that very thing in my dispensary-work with children), the more I come to regard them in the light of streptococcic infections, which attack chiefly the epithelial and endothelial tissues, wreaking their first, and most violent, havoc upon the former (which soon mend), and their second, more deadly venom upon the latter; and these are not so quick to recover.

Thus, by this backward process of reasoning, I am coming more and more to treat these subjects of endocarditis, arthritis, pleuritis, and nephritis of postexanthematous origin and the rest of the train of sequlæ, with streptococcus bacterin. Such a case recently came under my observation, one which illustrates my point and demonstrates the soundness of the therapy.

A little girl, six years old, had, within four or five weeks, gone through successive attacks of measles, tonsillitis, and mumps, finishing up with an acute arthritis and endocarditis. When I first saw her, she showed a temperature of 103.5°F., a pulse of 140, and her heart had that peculiar galloping, metallic, arrhythmical quality which every clinician has learned to associate with endocarditis. There was, besides, a distinct systolic murmur, which, however, I diagnosed as functional, since there were no physical signs of cardiac enlargement. The right knee was swollen to about twice its normal size, tense, red, and exquisitely painful. The blood count showed a 15,000 leukocytosis and a hemoglobin index of 70.

For the first twenty-four hours I gave the child digitalin and aspirin, for the purpose of controlling the heart a little and starting renal elimination. On the second day I gave a 20,000,000 dose of strepto-bacterin, and 4-drop doses of nuclein solution, continuing the nuclein throughout the treatment. For two weeks I prescribed no other treatment, except, of course, the ordinary hygienic measures, such as bathing, normal salt enemata, and keeping the bowels in order.

After the first twenty-four hours from the administration of the bacterin the temperature and pulse began to fall steadily, reaching normal on the fifth day. The swollen knee just as steadily diminished in size, redness, and sensitiveness, and the child's general condition improved remarkably. At the end of the second week she was sufficiently recovered so that she was able to be out.

I do not pretend, of course, that this little girl is well, even at this writing. Still, she has quite recovered from her acute attack and is well on the way to complete recovery. Her temperature, pulse, and blood count are normal, with the exception of a slight hemaglobin deficiency. I am now giving her arsenic and nuclein.

Two or three points I would like to bring out in the reporting of this very interesting case. Indeed, it was for this that I am writing about. The first is, that I went upon the assumption, as intimated in my introductory remarks, that it was a streptococcic invasion, and the outcome vindicated my position.

Second, that I prescribed no other remedy besides the bacterin. And especially do I wish to emphasize the fact that, with the exception of the first twenty-four hours, during which the child took some 30 or 40 grains of aspirin, I gave no salicylates whatever. For renal elimination I relied wholly upon normal salt enemata and copious drinking of weak lemonade; which latter I always give under similar circumstances.

Third, that I administered nuclein in conjunction with the bacterin. This is another of my routine practices. To my mind, nu-

clein is the logical accompaniment of bacterin or vaccine treatment.

Bacterins do not increase leukocytosis; they only prepare the germs for digestion by the leukocytes. Nuclein does increase leukocytosis, by increasing the nuclein elements in the blood, and thus promotes the other side of the defensive process to which vaccines are directed.

At all events, I invariably prescribe nuclein in conjunction with the bacterins, especially when the blood count demonstrates low hemopoietic power; and to this practice I attribute the encouraging success that I have thus far have experienced with the vaccine treatment of septic cases among children.

T. G. Atkinson.

Chicago, Ill.

THE TOM-TOM

Some men must beat the tom-tom, this I know;
Some forms demand that this be so.
Strange incantation calms the inner fear;
Though beatings do not cause to disappear
The evils which molest—but hold in chain
The victim by an unrelenting rein.
The beating of the tom-tom passes not;
The past race-habit some have forgot;
When evil comes, within dire fears arise
And for the tom-tom superstition cries.
The evil spirit which the tom-tom states
Is but the spirit which their fear creates.
Here comes a jade, hysteric, and obsessed
By thoughts of ills of which she's not possessed.
Impatient of advice that heals not dread,
She hastens to the tom-tom's beating head,
And there obtains the healing she desired—
'Mid dance and timbrel— by the tom-tom inspired.
Comes now a hypochondriac with limp and moan—
The healing art to him no balm hath shown;
No cure is known, and naught can meet his case.
Save the historic tom-tom of his race.
He turns his face into night and sees
His evil vanish—and the demon flees.
So "pathies" rise, and beat and scare away
The festering ills; all sicknesses obey
The tom-tom's rappings. And the mysteries
His mind knows not, nor yet his vision sees;
Submissive, all his dread of heart is still.
For evil demons part which vexed him ill.
How often unto this new pathic cult
Will sick men turn this pathy to consult;
We question not why some men ever beat
The tom-tom—'tis racial habits that they meet.
The tom-tom and the beater in command
Are but the answer to racial demand.
This "science" clever—which doth not belong
To Christ, the master over every wrong—
Blasphemously with tom-tom makes its din,
In His dear name the credulous to win,
To catch, beguile, and forcibly aline
Them subjects to a healing so divine.
The mind, the flesh, the bone hath each in turn
Been given cheer and hope of health's return;
The tom-tom's beats lift higher than the reach
Of wisdom which the learned sometimes teach
And he who strikes a bone is greater far
Than he who fathoms truth or finds a star.
The racial habit, with compelling force,
Deep laid in cell through all life's running course,
Instinctive and asserting springs to view,
Despite advancement, culture, and the new;
It calls for repetition of the things of yore,
And sounding tom-tom helps this impulse to encore.
Why seek by law to silence fraud and sin
Occasioned by the tom-tom's ceaseless din?
Naught else can please the superstitious heart
But fraud, pretense, which seems an occult art.
Best, patiently continue to evolve
The mind, to educate—the problem solve.
Till then the tom-tom's din will long be heard,
And with some legal form it will be geared.
You can not hush the mocking beat and thud
Of that old instrument hailed as good.
The racial life, repeating in it flow,
Will rise and all your pleadings overthrow.

Jas. A. DeMoss.

Thayer, Kans.

DIPHTHERIA. ECLAMPSIA

On May 24, 1902, I was called at about midnight to see a young woman suffering from "pneumonia" and, upon arriving, found these conditions: pulse, 110; temperature, 103.6 F.; respirations, 30; a hectic flush on both cheeks; a little grunt with each breath, which was very characteristic of the disease that had been diagnosed by a physician the day before. The physician who called the day before had promised to return the next morning, but failing, they sent for me.

It seemed to be pneumonia, as the doctor had diagnosed; yet, there was a peculiar cough that I had never heard in pneumonia. The bed standing in an alcove, I had it moved where better air could be got and gave the room a thorough ventilating, and removing everything, including the "company" of neighbors. The patient, 18 years old, had always enjoyed very robust health and was a fine specimen of young womanhood. I prescribed a turpentine jacket, soon had the temperature reduced, and caused the bowels to act freely. A slight headache, which she had when first seen, was now almost gone, and, after remaining two hours, I left her feeling very much better. Yet, that peculiar cough still sounded in my ears.

Calling next morning bright and early, I found her without the pneumonic symptoms. The throat presented a rich mahogany hue; no swelling; no white spots; nothing—only the rich mahogany hue and that peculiar cough. Her temperature was 1 1-2 degrees above normal; pulse, 96; skin, slightly moist. All emunctories were reasonably active, and I ordered the same treatment continued. But, still that peculiar cough and the mahogany hue of the throat haunted me. That afternoon I was informed that the girl's nose

seemed stopped up. Going over at once, I examined her nose with a good light, but, not seeing anything suspicious, I merely applied a soothing nasal jelly. Next morning, while seeming as well as she was at my second visit, her nasal trouble continued; and thus it persisted for the next several days.

Then one day, passing by the house about midnight, I stopped in and examined the girl's nasal cavities again with a strong light and this time discovered a peculiar grayish-white membrane, brittle and hard, extending down into the anterior nares, and bleeding freely when broken off. I now realized that I was dealing with a case of diphtheria, in all probability, but unfortunately not a vial of antitoxin was obtainable in the surrounding pharmacies. However, since no time must be wasted, I began to give calx iodata in large doses and told the mother not to allow anyone else in the room; to burn everything that had been about her nose and mouth—every rag, handkerchief and towel she had been using—and not to convey any textile to their own faces or mouths, eyes or nose, unless previously boiled.

Next morning I got a sample of the urine and found it loaded with albumin, which helped to confirm my diagnosis of diphtheria. Procuring 2000 units of antitoxin, this was instantly administered. After a lapse of twelve hours absolutely no result was apparent; so I administered another, a 5000-unit dose of antitoxin. Again waiting twelve hours, I found that the false membrane, while not growing, had not changed any, had not turned brown nor was beginning to peel off. Hence, I administered another 5000-unit dose. At the expiration of another twelve hours I noticed no results, and so once more injected a 5000-unit dose—making 17,000 units in all. This was my first experience with 5000-unit doses, and my first experience with a case of diphtheria in a grown person, or where there was no false membrane in the throat and this appeared in the nares only.

I have related this experience to a number of physicians in this city, and not one of them, as they say, has ever had a similar case. I read several authors on that subject at that time, but could not find anything like this case, neither could I get any suggestive help from any source.

This patient's chum had kissed her on the mouth before we realized what the trouble was, and in five days she was down with a severe sore throat. I was called to attend her, and I treated her with calx iodata with most satisfactory results, and inside of a week she was up again and as strong and hearty, apparently, as ever.

I have written about this case very much in detail so that anyone else meeting with a similar one may be able to go through with it and handle it without any misgivings, especially as to the large doses of antitoxin when necessary. I wish to add that eight months after I dismissed this young lady she would have what seemed like strokes of paralysis; but by giving large doses of a laxative, alternating between calomel and cascara, which eliminated the toxins, the trouble would be relieved. Some physicians recommended static electricity, but I did not deem that advisable, and am glad to say that now, after more than three years, she is the happy mother of two bright babies, has had no more paralysis, and is enjoying the very best of health.

Here is one other experience. On August 1, last, I was called to attend a confinement, the second after an interval of twelve years. The mother's face was badly swollen, while labor-pains were not just right, notwithstanding digital examination disclosed that conditions were otherwise normal. I assured the woman that everything was coming along as nicely as one could expect, and in about four hours was gratified to see her delivered of a girl of six and one-half pounds. Everything progressed nicely as to time and cutting the cord and getting the placenta, and conditions seemed all right, and nothing seemed out of the ordinary except the badly swollen face.

The following day passed without anything unusual, and the morning of the next day her condition seemed good; but in the afternoon I was informed. Calling on her at once, I found that the lochia had stopped, and I prescribed the following: Calomel, grs. 5; morphine sulphate, gr. 1-2; quinine sulphate, dr. 1; capsicum, grs. 2. Make into 30 capsules. Directions: Take one capsule every two hours, until the lochia are started, then every four hours. I also told them that, if the lochia did not start in four or five hours, to let me know.

About six hours after that she had a convulsion, and then another. As I was not at home when the call for me came, another physician was sent for. This brother, I was informed, put his finger on the pulse, took her temperature, looked at her a little, said nothing was wrong, then took his departure.

I arrived at the bedside about half an hour after this doctor had been there. I stopped the medicine that had been given to her, and

in place gave her 1-2 grain of morphine sulphate and one dosimetric granule of veratrine. While realizing that her condition was immediately serious, still she seemed to be somewhat better under the influence of the opiate. However, while I was talking over the telephone with a medical friend about this case, with a view to getting him in consultation, the woman suddenly had another convulsion. I took care of her as best I could, to keep her from lacerating her tongue with her teeth, and watched her through this seizure, which lasted only a few minutes (while the first one had lasted about one-half hour), then telephoned my friend, asking him to come over.

Without delay I gave another granule of veratrine, hypodermically, and, on the arrival of my consultant, gave another dose. Her pulse now softened, the sweat-glands began to act, kidneys acted, bowels moved, and while she complained of feeling very tired, she said she felt so very much better, turned over on her side and fell sound asleep. I explained things to my friend, who has been in practice about twenty years, and he declared he never had met with a case like it.

I have been practicing about seventeen years, and I never before encountered such a case. The treatment here described is the same I always have followed under similar circumstances. I have seen convulsions prior to delivery, but never subsequent to delivery. I should like to know wherein I erred, if I did err. I have other expectant mothers in hand now; two of them will likely be confined ere this gets into print, if it does get into print at all; and I cannot afford to lose any mothers, as my record shows but one lost in my entire practice—and at that time there was complication with meningitis, she having had six convulsions before I arrived. If I have made a mistake in caring for this case, I want to know it, and know it now.

Had the mother been afflicted with Bright's disease or some other kidney disease, her baby would not be as fine and healthy as it is. She gives a history of a miscarriage about four years ago, which has left her with an inflamed area in the region of the right ovary. She had treated by many doctors for this inflammation, but no one seems to have benefited her. I have been treating her now about three weeks, and when I saw her on the 15th inst. she was entirely free from pain or soreness in that region. A. W. Bleil.

Kansas City, Mo.

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[If we might presume to criticize Dr. Bleil in that first case, we should suggest that he should have had a bacteriologic examination made of the secretions from the throat and nose, doing this just as soon as the patient developed suspicious symptoms. That would have removed all uncertainty. Of course he did right to give the antitoxin without delay and in large doses—indeed, in a case of nasal diphtheria we should be inclined to give at least 10,000 units immediately, and if the case were very severe double that quantity might be administered. The large dose is in no sense dangerous. In *every* case of diphtheria, antitoxin should be employed, calx iodata and other indicated remedies being also used, as Dr. Bleil suggests.

We are glad that Dr. Bleil has again called attention to the value of veratrine in eclampsia. It is a great remedy, and too often neglected.—Ed.]

A STUDY OF THE CONVALESCENCE FROM MORPHINISM

My excuse for writing this article is, that I believe that members of the profession in general largely hold erroneous opinions in regard to the morphine habit, and I believe an appreciation of the facts would serve a useful purpose, making it possible for us to secure a higher percentage of permanent results.

A frequent, and in a measure excusable, misconception is, that the convalescence is very rapid—a misconception which I believe to be responsible for many a relapse. Considering the powerful character of the drug, we should expect the reverse to be true. And it is.

The change for the better in the patients' appearance is rapid. The improvement in appetite is rapid. The gain in flesh is rapid. The convalescent may say, and honestly believe, that he never felt better in his life. The family doctor, looking at him and seeing that his eye is bright, his countenance clear, and that he has gained in weight, may be excused for believing him. Both are wrong.

No one who has been in the clutches of morphine from five to thirty years can remember anything about what his feelings of real health were before taking the drug. This party, who thinks he never felt better in his life, will find that, if all goes well, he will be feeling ever so much better a month hence, and go on feeling increasingly better each passing month for a year to come. And it is self-evident that when one is really well he cannot increase feeling better.

A part of the convalescent's feelings of well-being is due to purely psychic causes. For the first time in perhaps years he finds that he is actually living and breathing without the aid of morphine. The sun shines brighter, the grass and foliage seem greener. The joy of existence is enhanced to a superlative degree, which those who have not experienced it can scarcely conceive of.

Now let us return to a consideration of the increase of appetite.

Judging from the abnormal increase in the cellular activity in the testicles, we may reasonably conclude that there is an abnormal increase in the cellular activities in those organs that have to do with digestion. When the convalescent was under the benumbing influence of morphine, the brain had to send out greater and greater motor stimuli to all parts of the body to keep the vital processes in motion. In the meantime the inhibitory impulses would be growing weaker and weaker.

Now, it scarcely would be conceivable that nature could at once tone down these motor stimuli or at once tone up the inhibitory stimuli the moment the last dose of the poison is withdrawn. Hence the increase in appetite may easily be due to a lack of nervous balance.

The mistake consists in thinking the increase of appetite and flesh means complete convalescence. I do not believe the increased appetite is harmful, in most instances, if the convalescent will take the precaution to eat only plain, well-cooked, nutritious food, because there seems to be an accompanying increase of digestive power. I believe the sooner the convalescent becomes fat and lazy, the sooner he will reach a desirable state of mental and nervous repose.

An easy way to prove that the convalescent is still far from normal, in spite of improved looks, appetite, and gain in weight, is to give him a long problem in addition to solve, or ask him to write a long letter, or, if he be a mechanic, give him a task that requires coordination of eye, hand, and brain, and then see how completely exhausted he very soon becomes.

The doctrine of "free will" seems to linger in the minds of many. And I believe that this doctrine is the cause of many a relapse. Modern psychology teaches that strength of will is utterly dependent upon our physical well- or ill-being. The convalescent's will is, necessarily, weak. What is the poor fellow to do then? I teach my patients not to rely on the will, but upon caution and discretion. Timidity, fear, and self-depreciation are prominent features of the morphine psychosis. This makes it easy for the convalescent to exercise caution and discretion. And, for the same reason, I find them teachable.

Unfortunately it is different with the whisky-and-morphine habitués, as also those taking both cocaine and morphine. The self-assertion, overconfidence, and impatience of the chronic alcoholic continue after the latter has added morphine to his whisky addiction. Even after the whisky addict has discarded spirits entirely for the more subtle intoxication of morphine, many features of the alcoholic psychosis remain in a greater or lesser degree for a long time.

We often hear this remark concerning some reformed drunkard: "Yes, he is all right now, but the bar-room manners still cling to him." It is a question how much of the manners here referred to are due to bar-room associations and how much to the direct effect of the alcohol on the brain. The alcohol-and-morphine convalescent is as weak in caution and discretion as he is in will-power. For this reason he has much less ability, after leaving the sanitarium, to conduct himself along safe and rational lines than has the straight morphine convalescent. When cocaine is added to morphine, more or less mental instability is apt to persist during convalescence, making permanent results less hopeful than with morphine alone; although cocaine-and-morphine users are more likely to pass through convalescence safely than those addicted to whisky and morphine conjoined.

I would much rather treat a person addicted to morphine for thirty years, who takes 60 grains a day and appears to be a physical wreck, than a habitué in apparently good condition taking 2 grains a day in connection with either whisky or cocaine, or both. Of course, this remark applies only to the period of convalescence. No inconsiderable amount of tact and skill is required to take the first type of patient off the drug and beyond craving, especially when this is to be accomplished without shock, and without the aid of restraint or surveillance or knockout doses of hyoscine or similar drug. But it may be very easy to do this with victims of the second class.

This is a matter of very great importance, as will appear from what follows. A matter of some importance to ourselves, because, if our work were confined to these mixed cases, it would be almost impossible—no matter how faithful and conscientious we might be in

our work—to maintain a reputation for honor and fair dealing, let alone a reputation for successful work. Yet we do, many times, get brilliant results in these mixed cases. For this reason and because they are in such a deplorable state we feel bound to do our best for them.

But it is a matter of far greater importance to the thousands of victims of advanced straight morphinism who are being doomed to lifelong slavery and misery because their medical advisers ignorantly suppose them to be beyond help.

It is thought by many that the correct way to handle the stage of convalescence is to keep these patients under restraint. For some of the mentally unbalanced having the habit mixed it is perhaps the better plan. But there are two reasons that may be urged against its general application.

The first objection is, that restraints are expensive, and very many addicts would be denied assistance on this account.

In the second place, enforced restraint teaches the convalescent—by inference at least—that he is an incompetent weakling. Then, when at last he is turned loose, at the first headache, toothache or bellyache that comes along he is apt to give up at once and slump back into his old morphine-ways.

My patients are called upon to exercise self-control the very first day of their treatment and told that they may take morphine on the side if they wish, but if they want to get well they must not do so, and that I expect their assistance throughout the entire course of treatment. So, by the time they leave me they have already had considerable training in self-reliance.

The reader may think my reasoning faulty, in that volition is required to exercise either caution or discretion. My contention is, that the morphine-addict's self-distrust is so great and his fear of relapse is so intense that he generally has sufficient will-power to exercise both caution and discretion; especially so after he has been thoroughly instructed in regard to the dangers that are likely to beset his pathway in the future.

I believe that alcohol is responsible for more than one-half of the relapses among men, and for not a few among the women. You all know the old, old story—"he never would have done it if he had not been drunk."

Any drug that deadens consciousness is equally dangerous. Although such are not so often resorted to by the laity, many doctors have brought on a relapse by indiscretion in this respect.

Overwork before convalescence is complete is a very frequent cause of relapse. And the sad part of it is that in many instances the convalescent is compelled to go to work too soon because of lack of money. They almost always are too sensitive to seek assistance from their friends; and it is here that the family doctor might prove of great service to us by acquainting the convalescent's friends with the grave danger he was in from going to work too soon.

The convalescent should be able to perform without fatigue the test-tasks that I mentioned earlier in this article, before taking up serious work. This applies with especial force to members of our own profession. Think of a doctor taking up the arduous duties before he is able to add up a long column of numbers without becoming completely exhausted. Yet many have been guilty of doing that very thing, and many no doubt will repeat this indiscretion in the future. They are always in a hurry to get home to hold their practice, forgetting that no practice is worth a tithe of what it is worth to be forever free from morphine.

If the doctor goes home directly after leaving the sanitarium, looking and acting better than he has been for years, his patrons will see no reason why they should not at once avail themselves of his services. For this reason he should first spend a few weeks elsewhere.

The increased sexual appetite may lead some to frequent houses of ill-repute. Here they come into contact both with alcohol and morphine, as many of the inmates of these places use morphine. The proper way to avoid the disagreeable features of erotism is by cold sponge-baths and cold sponging of the spine.

Where there are no prudential reasons to the contrary, it is best for the convalescent to admit freely that he has taken treatment for morphinism. By so doing he burns his bridges behind him and receives the powerful moral support of his friends.

I once knew a man in a Michigan city who had been blind for twenty years and acquired such facility in feeling his way about town with his cane that he could go to any part of the city almost as well as if he could see. His sight was restored by an operation. On his first trip down town, after being able to see, he became so confused he had to ask a friend to lead him home. It would naturally occur to one that something similar would happen to one who finds himself absolutely free from mor-

phine toxemia for the first time in years; and such indeed is the fact. It may be a mere feeling of strangeness, and it may amount to positive mental confusion.

I try to keep the patient by me until this stage passes off. The morphine-psychosis does not at once pass away with the last dose. The first thing to return is a normal amount of pride and self-respect. The last thing to return is the power to perform mental or physical labor without undue fatigue.

In conclusion let me say that the convalescent who tries to avoid the dangers mentioned in this article, with fear and trembling, is the one who is likely to succeed. Happily there is one thing we can promise without fear of mistake. When once the craving for morphine is gone it cannot be reestablished unless the person cured first returns to the use of the drug.

C. B. Pearson.

Baltimore, Md.

THE PRAYER WAS OMITTED

The article in the July Clinic, "The Quality of Courage, and a Chloroformed Indian," is very interesting as well as suggestive, particularly so General Sibley's prayer under trying circumstances; and this story reminds me of an incident in which a prayer was called for at an Indian wedding but failed to materialize.

There is an Indian reservation in the southeastern corner of Connecticut where a very small remnant of the Pequot tribe still holds forth. In my boyhood days there were living on the reservation quite a number of Indians of different tribes, with an admixture of negro-blood. However, the white man's firewater and religion have proven incompatible with the Indian's nature, and they are now nearly extinct as a race.

This Pequot tribe at the time referred to had an overseer or commissioner who looked after their welfare. This overseer was also a justice of the peace, which officials were authorized to tie the marriage knot. On the occasion referred to, the "squire" took my father, Major S., along to the reservation, to serve as a witness to a prospective marriage.

After the 'squire had pronounced the couple duly spliced, he turned to Major Stanton and said that one more thing had to be done, and this he, the major, would have to do.

"And, pray, what is that?" queried the major.

"Make a prayer," replied the 'squire.

"All right," responded the major, "but there is still another duty to be performed, and if I say the prayer you must attend to the other part."

"And that is—?"

"Kiss the bride."

"No, no," blurted out the gentleman, "I'll be d—d if I will—you just omit the prayer."

And so it was that two important ceremonials of the solemn proceedings never materialized.

George D. Stanton.

Stonington, Conn.

GENERAL SIBLEY AGAIN

Referring to the communication of Mr. Doane Robinson, of Pierre, South Dakota, appearing in Clinical Medicine for August (page 690), I will say that I am very sorry, indeed, if in telling a perfectly true story of General H. H. Sibley (see July issue, page 608) I have done a "*grave* injustice to the memory of one of the great men of the Northwest."

Certainly, nothing was further from my intention. I honored General Sibley more than any other man I ever knew, excepting my own father, who was Captain of Company C, 30th Wisconsin Volunteer Infantry, and who accompanied us on that memorable trip. Sibley may have been an Episcopalian, but, if he was, he never paraded that fact, and I never heard of it before.

General Sibley was a gentleman, a fighter, and a disciplinarian; and, although his speech usually was "chaste" and elegant, when he got excited or angry (and he was human enough for both), his language at times was what you would call more "forcible" than elegant or polite; and, while I have heard him use the same words that you sometimes hear in a bible-class, they were not always what you would call Sunday-school sentences.

I have heard it said that no man is a great man to his barber; meaning, I suppose, that familiarity breeds contempt. In the capacity of orderly to General Sibley, although I was but a boy, I have shaved him, cut his hair, beat him at checkers, laughed at his stories, slept with him, smoked with him, hunted and fished with him, and through it all he was always a great man to me, and he is yet.

I do not believe the perfectly true story I told about him will strike any fair-minded man as a "grave injustice" or that it willhurt his reputation, either as a religious man or as a soldier and fighter. However, if it does, I will apologize; but I stick to the story.

Fifty years ago, there were very few men in the "Northwest" but who knew how to swear. In moments of intense excitement or anger, men sometimes drop into profanity, just as real Irishman, from the "ould sod," drops into his brogue when excited or angry, no matter how well he has learned to speak the English language in its purity.

Sibley's prayer was an appeal for aid, and was couched in the language of a report to the Commander in Chief of the Army. I remember it word for word, and I gave it as I remember it. And that is the truth of the matter. "Oh, that mine enemy would write a book!" Thus exclaimed an old critic. "Grave injustice to one of the great men of the Northwest!" exclaims the historian Doane Robinson.

History, as a rule, is more generous to a man after he is dead than he really deserves. I am both generous and just. I believe a man can be human enough to swear in strenuous moments and still be a Christian. If not, some of us are going to fare rather poorly when the final balance is struck.

I think that a real historian of Dakota as it was before it was divided could prove that Sitting Bull was a Christian statesman; that Wounded Knee was a member of the Salvation Army; that Big Jumping Bear was a captain among the Volunteers of America; and that old Rain-in-the-Face was a Sunday-school superintendent.

"Do you get me, Steve?" *My story is true.*

GEO. D. SWAINE.

Cleveland, Ohio.

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B. F. VAN DUZEE.

Hamburg, N. Y.

PHARMACOLOGICAL WORK AT WASHINGTON

The United States Civil Service Commission announces an open competitive examination for a professor of pharmacy at the Hygienic Laboratory of the Public Health Service at Washington, D. C. The salary will be about $4500.00 a year.

The position is open to some man who has had broad training, extensive practical experience in various branches of pharmacology, physiology, physiological and pharmaceutical chemistry, chemotherapy, and so on. The applicant should have ten years' experience in work of this kind, educational training equivalent to that required of Ph. D., and some experience in clinical medicine. He must not have reached his forty-fifth birthday on the day of his examination.

If you are interested, write to United States Civil Service Commission, Washington, D. C.

CLEANING UP CHINA

We sometimes make a mistake in writing about such a big country as China. Lack of traveling facilities has made each place a law unto itself so far as customs are concerned; whence, to say that certain things are characteristic of all China, is liable to mislead. In the north the Chinese have wagon-roads, but they have only cow-paths in the south. Many of the streets in Peking are wide, but those of Nanking are not. So, one needs to be careful when making too general statements about prevailing conditions in the land of China. None, however, need have fear when speaking about the sanitary conditions, for it is pretty safe to say that China—north, east, south, and west—is dirty, very dirty.

Nevertheless, some think that the Chinese have certain good ideas about sanitary principles. Thus, for instance, as a rule they put on more clothing as the weather gets colder, and take it off gradually as the summer season approaches. On a suddenly hot day in early spring they will be dressed just as lightly as in midsummer.

The Chinese drink but little alcohol and now do not smoke opium. Even the cigarette is boycotted in many places.

They sweep the bare ground in front of their doors. Their streets have drains. Stone pavements cover most of the city streets. They burn up every thing possible as fuel, anything combustible that they cannot eat or wear or sell or use in building their houses. Everything seems to be utilized. Melon-seeds, weeds, shrimps, snails, minnows; the lungs, kidneys, spleen, and intestines of slaughtered animals—all are utilized for food. Rags are used for shoe-soles and mops. Feathers become dusters and toys. What the rich do not want becomes clothing for the poor, and what the poor folk cannot eat keeps the beggars alive—when it does not kill them. Nothing whatsoever is wasted. Back to the soil it goes and enriches it for producing more

food. All this seems to sound as if China had good ideas about hygiene and sanitation.

And the people do, if they only would work the process fast enough. The trouble is that the garbage-pile stands too long before being transported back to the field. On the banks of the stream which furnishes the city-water lies the dump, when the springtime arrives, with its sunshine and rain, rotting there and polluting the waters. The street-drains are imperfectly stone-lined and soon become filled with black filth. The houses have the corners filled with all manner of possessions, behind and around which gather dirt and gambol rats and mice. The butchers do not differentiate any too nicely between living animals, and diseased, dying, and dead ones: to them, all is meat. Old donkeys and horses, dead water-buffaloes, even dogs and cats turned into meat find buyers among the poor and poverty-stricken. We should eat them, too, I ween, if we were as poor and as ignorant as some of these godforsaken creatures are.

In very deed, we have to go very slow when considering China's theories and actual practices in regard to sanitation. Most of the theories are observed in the breech. The Chinese are supposed to drink only water that has been boiled; yet, very little of the water drank ever reaches the boiling point. Along with their hot foods, quantities of melons, cucumbers, radishes, turnips, and most fruits are eaten raw. Flies have walked all over most of these, and those displayed for sale on the streets are handled by many befouled hands before the final purchaser devours what he has bought.

In the teashops and restaurants, the waiter carries his wiping-cloth (rather dishcloth and wiping-cloth combined) around in his belt. It hangs against his dirty clothes, is used alike to wash dishes, clean tables, wipe chopsticks and teacups, flip the flies off the vegetables or drive away the hungry dog.

Garbage-dumps are left indefinitely at the corners of streets and on vacant lots. Manure is carried by the gardeners to open tanks in their fields. These form breeding-places for flies, and too many of them are not far distant from the city streets. In summer time the sweetmeats, fruits, meats, and breadstuffs exposed for sale become covered with these bacteria-carrying pests.

Add to these conditions the lack of any form of quarantine, the prevalence of cholera, dysentery, septic infections, smallpox, and tuberculosis, together with the frightful death rate among infants, to say nothing of the prevalence of infanticide, and we can see that China is a rich field for the testing of the value of sanitary principles.

In the new era of the founding of the republican form of government, the new officials have had to consider first those questions which press hardest, such as finance, transportation, international realtionships, agriculture, mining, the voting franchise, and restriction of lawlessness. They have had little time for thought for the sanitation of cities, the saving of infants, the banishing of epidemics.

In the midst of such a vast population the few doctors who have set up mission-hospitals here and there have not been able to produce a very great number of Chinese physicians trained in western medicine. The old style Chinese doctor knows absolutely nothing about sanitation. Until the recent changes, foreign doctors (those in missionary service in China now number about 500) have been unable to gain the public ear upon this important question. Practically all that could be done was to minister to the sick who came to the hospital, teach a few helpers or students, and enforce sanitary principles in the hospital. The consequence is that the Chinese at large have learned almost nothing (and apparently cared very little to learn) about this subject so important in its relation to the business, education, morals, and society of any country.

The door has now opened to missionary doctors to add public teaching of the principles of sanitation to their other missionary work. The door has been opened to them both by the local people among whom their hospitals have been located and by the government of China. Note the address made by the President of the Republic, Yuan Shi Kai, to the Medical Missionary Conference which met in Peking in January, 1913. This address was given in a most kindly manner. His reception was much more cordial than even official translation, which I quote in part, reveals.

"It gives me great pleasure to receive here so many members of the China Medical Missionary Conference," he said. "I am really very grateful for the charitable services you have rendered the people, especially in the interior of the country where they do not know the importance of sanitary principles.

"For a country to be strong and prosperous, it is essential that its citizens be healthy. Sanitation is, therefore, of the highest importance. It is due to you, who

have directed them to study those principles, that sanitary knowledge and sanitary methods are now being widely spread. . . . . The disastrous plague in Manchuria, in 1911, at one time alarmed the whole world. Many of you were engaged in assisting the local authorities to devise means of prevention, and the checking of the extension of the pestilence was principally due to your efforts.

"At the time of the Revolution, when the North and the South were at war, many were killed and injured. Many of you, facing difficulties and running risks, were out in the field to relieve a large number of sufferers. I feel very deeply indebted to you and regretted there was no opportunity for me to thank you in person. I am glad that, in receiving you today, I am able to express my personal thanks. I also entertain the hope that on your return to your several spheres of usefulness you will guide our people with the same zeal that you have always exerted so that in time to come they will be strong in body and mind."

During the days of the revolution other forms of mission work had to be more or less suspended. Medical workers found ample service in ministering to the sick and wounded and turned their hospitals into Red Cross headquarters. Others followed the armies and opened field-hospitals. Often the foreigners were called upon, who were able to stop useless bloodshed. Noncombatants had a feeling of safety when a foreign missionary still stayed by his work in their city. Such work firmly established the medical worker in the hearts of the people, and they have since shown willingness to listen and to adopt his suggestions in regard to sanitary or other useful measures.

One great difficulty in the way of the medical work that has been done in the past was that most of the patients were not sanitary in their habits and, hence, it was almost impossible to heal their diseases. How could itch be healed when the patient took not one bath all winter long? The same difficulty faced the treating of all skin troubles. Digestive disturbances persisted because of the faulty dietary of the patients. Ulcers grew to unparalleled size, because the patient persistently kept them covered with a dirty plaster, shutting in the septic microorganism. The observance of sanitary laws is more important in China to the healing of most diseases than any medicine which can be given.

This has lead a number of the medical missionaries and others to prepare posters and leaflets, to be given to patients, which contain directions as to his own hygiene in treatment. Dr. Logan thus inaugurated in his city, in the fall of 1912, a regular educational campaign against cholera. The Shanghai Board of Health, under Dr. Stanley, has prepared a number of posters on tuberculosis, cholera, smallpox, the plague, and on general sanitation.

This last autumn we were requested to give a series of lectures to the medical students on sanitation and hygiene. These lectures were first given to the schools and invited educated people of our city. Many schools attended lectures in body. There was, usually, no trouble about getting an audience. It would have been impossible to have attracted such an audience, to hear the foreigner, five years ago.

Subjects which could be easily understood and made practical were chosen. Outlines of the lectures or simple statements of the principles to be discussed were posted up and advertised. Rough drawings of flies, mosquitoes, food comparisons, appearances of various germs, and so on, were used to illustrate. Chest measurements were made. Children came up and illustrated sitting at proper and improper attitudes in schoolroom.

Disease-germs being spread from the sick; preparation and selection of foods; cleaning of streets and homes; flies and their relation to garbage, closets, and germs; public playgrounds and public gardens versus public nuisances; school sanitation; public markets, and quarantine proved to be fruitful and interesting topics to them.

Some of the things we found necessary to emphasize were, that public rights must take precedence before private rights; "cleanliness is next to godliness;" public closets not only lead the people to higher morals but leave clean places for their children's playground; it is better to become fruitful rearers of children than fruitful producers; boards of health will find that eternal vigilance is the price of community health and that a few days of slackness may undo months of previous activity.

Medical missions have too often been considered by the laity as merely a means of getting a hearing from non-Christians for the gospel. The medical missionaries of China are living witnesses to the narrowness of this view; and if they were doing nothing else they would be rendering both that country and the world at large a service in that they are beginning to demonstrate that there is

a still greater field for our activities in aiding to build up a new and a cleaner China.

ELLIOTT I. OSGOOD

Chuchow, China.

A MONSTROSITY

On April 28 I attended a woman at childbirth. Her age was 20 years, and it was her first child. It was found to be a monstrosity of female sex, a description of which may interest some of the readers of CLINICAL MEDICINE.

The right arm was not developed, there being only a small protuberance of about the size of a piece of lead-pencil one-quarter of an inch in length.

The sternum and spinal column curved to the left, forming almost a half-circle. The skin and muscles over the right half of the lower chest and abdomen were so thin they were transparent. The heart was situated at the lower end of the sternum and could be seen to beat. The liver was on the outside and had no covering whatever, being firmly attached over the right mammary gland. Just below the liver two knuckles of intestines were on the outside, coming out and reentering the abdomen through two well-defined and separate openings. The heart, liver, stomach, and intestines were all normal in form and size. Circulation was perfect, the blood-vessels entering the liver through the chest-walls. The child lived fifteen minutes.

I am very sorry that the accompanying photographs are not satisfactory. They were taken with a kodak, but the skin or membrane had ruptured in handling before I could get a camera.

I would like to know the cause of this malformation. Of course all the old women in the neighborhood have the problem solved. The husband shot and killed a bird about the second or third month of his wife's pregnancy; its intestines and liver were shot out and his wife picked it up while the heart was still beating. So, of course, the women say it is a "mark." If it is a mark, it is a mighty heavy one. Let me hear the opinions of the medical professors.

J. J. CRAWLEY.

Overbrook, Okla.

[The photos sent by Dr. Crawley are so poor that we shall not attempt to reproduce them; however, the doctor's description is so good that the nature of the defects will be clear to every reader. In this case the monstrosity is due to defective development, with imperfect closure of the thoracic and abdominal walls. Technically it would be known as a case of *thoracogastroschisis*. The limbs may also share in the defective development in cases like this, which are no longer regarded as due to fright or prenatal "marking." All these monsters fall into certain well-defined and carefully defined classes, with scientific names for every species and variety.—ED.]

TREATMENT OF INFANTILE PARALYSIS

For three summers we have had to deal with infantile paralysis. Three years ago we had under treatment four cases, two years ago we had five cases and last year, three; making eleven in all. These cases all occurred in the country or in little hamlets; some of them were in quite remote places along the foot of the North Mountain. There never was more than one case in a family, although there were as many as five children in some of the families. The age of those afflicted ranged between one and one-half and sixteen years, but the latter was only past the seventh year. All the patients recovered, but one, a girl, was left a hopeless cripple. She was absolutely helpless and for a long time could not move even her head; still, at present, she has recovered the use of all her muscles except those of the lower limbs.

The sixteen-year-old patient, a boy, used crutches for a while, then a cane, but is able now to walk fairly well without the aid of either. All the rest have fully recovered. The severe cases were those of three years ago.

The treatment in the main was as follows: A thorough clean-out with calomel and podophyllin was followed by pushing the sulphocarbolates and an occasional purge with saline laxative, until the stools were odorless. The temperature was controlled with aconitine, gr. 1-800, given every twenty or thirty minutes until the skin became active, the arterial tension lowered, and the temperature dropped to within proper bounds. For the toxemia, iodized calcium and nuclein were pushed to saturation. If the heart showed signs of weakening, cactus was administered. Strychnine was given after the acute symptoms had subsided, to restore tone to the weakened nervous system. The children were kept outdoors in the shade as much as possible during the acute stage; as soon as able they were given their toys and allowed to play at will.

They were massaged twice daily, especially the parts that were paralyzed; while those that were badly emaciated were given a rub with olive oil.

Now I desire to call the reader's attention to two factors in my treatment that I believe did more good than anything else. These were the aconitine during the early stages and the massage later.

The readers are aware of the value of aconite in puerperal eclampsia and in convulsions of various kinds. I believe that, if I had pushed the aconitine three years ago, as I did the two seasons following, I should have saved at least one patient from being a cripple.

Don't fail to push this drug in the early stages until its physiologic effect is produced; watching its action closely. Then begin massage as soon as the acute symptoms subside and finish with an inunction of sweet oil or cacao-butter. It is remarkable how rapid the atrophied muscles fill out under influence.

C. W. Canan.

Orkney Springs, Va.

COPPER SULPHOCARBOLATE AS AN INTESTINAL ANTISEPTIC

Not only has copper sulphocarbolate a place in the treatment of humans, but in animals as well. Veterinarians are now employing it in the treatment of bowel disturbances in dogs and cats as well as other animals.

Recently a case of cholera developed in one of my chickens and the veterinarian whom I called in, after prescribing for the fowl, advised me to place a piece of "bluestone" in the water for the other chickens. Not having any copper sulphate at hand, I made a solution of the sulphocarbolate and gave it to all of the flock, sick and well. At first the solution was made in the strength of 1 grain to the pint (1:7000). This might be considered too strong, possibly, but none of the fowls showed any bad effect and none of them refused the water.

The sick hen was given a 1:2000 solution of corrosive sublimate, in addition to the sulphocarbolate solution, and recovery was prompt. It is impossible, of course, to determine which of the remedies was the effective one in this instance. However, as no other attacks developed, it is very probable that the sulphocarbolate was at least an effective prophylactic. After the first few days of use of the sulphocarbolate the strength of the solution was reduced, until at present it is about 1-20 grain to the pint (1:14,000). The chickens have all done well under such treatment, and I am practically sure that they have been receiving water almost, if not quite, free from pathogenic or other organisms.

It is possible that this report would better have been published either in a farm-journal or one devoted to veterinary medicine, but I am offering it because of the fact that I know that many doctors are the possessors of poultry, while not a few are far removed from veterinary assistance, and that possibly this little experience might be of some value.

The veterinarian who had this case in charge had never employed copper sulphocarbolate in this way before, but after observing the results obtained reached the conclusion that this salt gave better results than did the sulphate.

I have had a bottle-fed baby under observation for some time. Owing to a change of residence, this babe was put on sweetened condensed milk for a short time, long enough, though, to develop a marked fermentation and considerable bowel disturbance, with consequent loss of weight. After full establishment in the new home the baby's diet was changed to cow's milk. Still, for some time the trouble lingered, the stools being frequent, loose and ill-smelling.

Following a clearing out of the bowels with calomel, I administered copper sulphocarbolate, 1-64 grain, every three or four hours, with the happy result that conditions soon became normal. As a prophylactic and to be reasonably assured that the organisms in the milk be inhibited, I added the sulphocarbolate, in small amount to the water employed in diluting the milk. The result was, that as long as milk so treated was given there was no return of bowel disturbance and that the child gained weight. The mother neglected to advise me when her supply of the sulphocarbolate was exhausted, with the result that a slight bowel disturbance occurred. Another clearing out with calomel, followed by the sulphocarbolate as formerly, acted as a corrective, and the babe is now as nearly normal as any child could be.

During the middle of July I was called to see a boy of four who had marked enterocolitis. At 7 in the morning the temperature in the axilla was 102.4°F.; there was a rise to 104.1 at noon. The history of the case was, that the patient had, the day before, eaten raw carrots, turnips and fruit and topped off with an ice-cream soda and more raw fruit. His bowel movements were very

ill-smelling and showed much undigested raw fruit and vegetable matter.

I cleared the bowels with calomel followed by laxative saline, gave aconitine to control the pulse (130 to 140) and temperature, and copper sulphocarbolate as an intestinal antiseptic. In addition to the aconitine, to control the fever and to act as a quieting agent, he was given several cool baths. As soon as his bowels were cleared signs of improvement appeared, and the following morning he awoke with a normal temperature. The copper sulphocarbolate was continued for several days, and, although he was on a limited diet for only a day or two subsequent to the acute attack, there was absolutely no sign of any bowel disturbance or of food decomposition.

In less than a week the youngster was as active as usual and taking an interest in all things happening about the ranch. It is possible that the clearing of the bowel had much to do with the cessation of the acute symptoms, but I believe that the copper sulphocarbolate overcame a tendency to a prolonged attack and that it acted as a prophylactic against recurrence.

GEORGE L. SERVOSS.

Gardnerville, Nev.

THE DEATH OF DOCTOR DENIS R. BOGUE

It is with regret that we have to announce the death of Dr. Denis R. Bogue, of Cincinnati, which occurred on August 5. Doctor Bogue was one of the earliest workers in the field of active-principle therapeutics in this country, having been associated with those old dosimetric war-horses Silva, Harper, Copeland, and Thackeray as a traveling salesmen for the Metric Granule Company, which these four connected many years ago in this city. Later he embarked in business for himself, for some years being the moving spirit in the American Granule and Tablet Company, in Cincinnati, of which he was the organizer.

Dr. Bogue has always been warmly interested in dosimetric medication, and was an earnest disciple of the great Belgian master, Burggraeve. We were proud to count him among our friends.

A mutual friend, Dr. J. R. McMillan, of Cincinnati, writes us that Dr. Bogue "always tried to measure up to his possibilities." While he never made as much money as many other people, and never had realized half of his ideals, he did succeed in raising a family of loving, loyal children; he was liberal clean, and honest; he was a seeker after scientific and artistic truth—and, as Dr. McMillan asks, "who could say he was not successful?"

We are glad to have an opportunity to give this brief tribute to a man who was our friend and who worked earnestly for the betterment of our therapeutics.

A GONORRHEA CURE AND OTHER HINTS FROM DR. W. T. THACKERAY

While it is seldom that I can offer anything new, yet occasionally it does happen, and while my present experience may not be new to others it certainly is to me.

The case: A young friend went to San Antonio on a visit and—well, there is no use in telling the story of his lapse of virtue. Anyway, he appealed to me five days later to help him out of a "bad scrape." And it was a bad scrape, for a fact, for he had a gonorrheal infection far up in the urethra, and domestic duties confronted at home that placed him in a thoroughly embarrassing position.

For a long while I figured over our old-time remedies, but could think of nothing that offered present help. Then I took a good big think, which decided me that thuja and echinacea seemed to fit the condition and that, if there was any virtue in reports, I might expect prompt results.

As a result of this overworking of my think-tank, I prescribed specific echinacea, gtt.5, and specific thuja, gtt. 3, to be taken every four hours; and, as an injection I ordered potassium permanganate, 1-4 grain dissolved in 1 ounce of water to be used after each micturition. To my great surprise, after three days all signs of the disease had disappeared. Today, ten days after the invasion, I made a micropscopic examination (through the kindness of a brother doctor) of the urethral secretion, and there was absolutely no sign of gonococci.

I know of no other report of a similar case, nor do I know that the same experience will be had by others; still, it is worth the trial. I do want to say, that in this case I have made a friend who is worth having, since he is related to nearly everybody in this section, and he thinks that I am "it."

I want to add that I have just received a copy of the new Price List of the Abbott Alkaloidal Company, and I am pleased to note that they have restored pepsin to its proper place. I know that, among some physicians who do not know how to use pep-

sin and who expect more from it than it promises, this valuable digestive ferment has fallen into innocuous desuetude.

Now, it so happened that some thirty years ago I was interested in Professor Schaeffer's experiments with pepsin, and I made some of the material after his method. Last fall, while attending the Congress of Hygiene in Washington, I visited the Bureau of Chemistry of the Department of Agriculture and Dr. Kebler, chief of Drug Division, advised me of the tests thay were making with pepsin, and I told him that I had some samples of Schaeffer pepsin that I made some thirty years ago and he requested that, if possible, I send him enough for a test. The following letter from the Department shows the result:

Dr. W. T. Thackeray, President Board of Health, Fowlerton, Texas: Referring to your letter of October 16, 1912, and our reply of October 23, 1912, concerning sample of pepsin that you kindly forwarded for our information, I beg to advise that an examination of the sample has been made according to the Jacoby-Solm-Ricin method, and the sample was found to be of U. S. P. strength (1 to 3000). Respectfully,

L. F. Kebler.
Chief, Drug Division.

I sincerely hope that my experience with the gonnorhea case may prove of value to others and that I may induce some of my confères to give more study to pepsin.

W. T. Thackeray.

Fowlerton, Texas.

A COMPLIMENT. TYPHOID FEVER. SEXUAL PERVERSION

I am "loving" our journal better with every fresh copy. Of six medical periodicals I take, I get more good out of Clinical Medicine, with *The Critic and Guide* second. I am a firm believer in Dr. Robinson's teachings about the controll of the size of our families. We control the number of the horses, cattle, sheep, or hogs we keep, not by destroying, but by causing or preventing the starting. Why not, then, prevent the "starting" of a vastly more important product than any of the creatures named. In my practice I daily see the need of this information among the poor workers of our cotton-mill.

What is wrong in my work this season? I am having too many typhoid patients among the children from the ages of seven to thirteen. I have never met anything like the present experience.

At first these children, when attacked, have some diarrhea for about two days, then they droop about for three or four days with a headache, and back, legs and arms pain them. Then I find them with a coated pointed tongue. Then the abdomen becomes tympanitic, skin is dry and hot, the pulse is high, temperature above 100° F., which (although I clean out, clean up and keep clean) gradually goes up day by day, passing the crisis by about the seventh to tenth day, when the fever as gradually comes down to normal. In evey feature it is a typical typhoid fever.

Why so much of it, Mr. Editor? Where do they get it? Why the greater percentage of this age? This is a general condition throughout our section.

A description of an interesting patient encountered last week will not take up much of your valuable space, and may amuse.

A bachelor—a stingy old fellow—having for years been troubled with constipation, resorted for a while to soap suppositories; then he used tallow ones; the latter finally losing their efficacy, for some reason he began the introduction of a Godfrey's cordial vial (little end first, of course) which on being withdrawn would produce a passage. This, like the others, began to lose its good effect, unless the glass tube was pushed higher up. However, he persisted in this mode of causing an operation until last week, when he pushed the vial too far and lost hold of it. There the bottle remained; but by and by the fellow got scared and came to me, and I could feel its little end up near his liver. With proper manipulation, and external pressure, I succeeded in pushing the bottle down the bowel, guiding the larger, rectal, end, finally extricating it, to the great relief of the stingy old fellow. He has decided to buy pills or "salts" in the future.

Success to the alkaloidal lines and The Clinic.

G. E. Flowers.

Hickory, N. C.

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[Why this large number of cases of typhoid fever in children? No one can answer positively without a personal "survey" of local conditions, but I suspect the milk supply. When the disease prevails principally among the very young then the food peculiar to the young should be made to object of a searching investigation. Whatever the cause, "clean up" thoroughly around the homes of the sick, exclude flies, boil the drinking water, sterilize dejections and avoid unnecessary contact between the sick and the well. And *always* resort to prophylactic vaccination of those exposed or likely to be exposed.

That "stingy old bachelor," I fear, is a sexual pervert. Unfortunately, he had discoverd new sensations with the candle, and that led him to explore just a little too far.—ED.]

"THE MODERN HOSPITAL"

We have just received the first number of *The Modern Hospital*, which is described as "an international journal devoted to the building, equipment and administration of hospitals, sanatoriums and allied institutions, and to their medical, surgical and nursing service." The editorial staff of this new journalistic undertaking is headed by Dr. John A. Hornsby, for many years the able superintendent of the Michael Reese Hospital of Chicago. The journal is published by the Modern Hospital Publishing Company, Metropolitan Building, St. Louis; this Company being headed by our old friend Dr. Otho F. Ball, the well-known publisher of *The Interstate Medical Journal*.

The first number is beautiful to look upon and interesting to read; in fact, it is of so much interest that we hardly see how anyone who is connected in any way with hospital work can get along without it. The subscription price is $3.00 a year.

SHALL THE UNITED STATES RECOGNIZE HUERTA?

The vacillating policy at Washington with respect to Mexico has caused a great deal of surprise among foreign residents in this country. I suppose it can be explained only in one way—ignorance of the Latin-American character. We will suppose President Wilson to be honest in not recognizing the government of President Huerta, as not emanating from the people. But, as the people are at present, such a government as Huerta's is the only kind feasible for Mexico, as the Mexican people have amply proven that they are not yet apt for self-government.

Let us take a look, for instance, at this little state of Colima, with altogether an area of only 3500 square miles or thereabouts, a very rich state where property is well divided and everybody has something to live on. Even before Madero became president, the people essayed the rights of citizenship and held state elections, and Mr. Alamillo by their will became governor. This gentleman proved himself to be just and equitable, treating poor and rich alike, and during his short term of office he made some notable improvements and commenced others for the benefit of the state and its capital. But, in spite of the man's gubernatorial capacities and virtues, the people got tired of him in less than two years, and, starting an embryo revolution, kicked him out. At least that is what it amounts to, as General Huerta, to keep the revolution from spreading, had to call him to Mexico and put a military governor in his place.

The people, of course, do not like that, but Governor Jaramillo, the present incumbent—who, by the way, is a hero of the American war of '47—might perhaps not understand much about politics. But it is supposed that he understands, as a specialist of Porfirio Diaz's school, how to cure chronic and insipid turmoilitis on short notice; and, so, dissatisfied citizens smile and say they are happy. And, as a result, Colima, *á la* Jaramillo, is one of the few states that is prospering in spite of the revolution; and at present it is full of refugees from Sonora, Michoacan, Chihuahua, Morelos, and other states where people at present are enjoying freedom as they understand it, amusing themselves electing governors and kicking them out, and, incidentally, building bonfires with their neighbor's furniture, changing their solid homes into fleeting smoke and other amusements not quite so innocent.

Madero, who too late discovered his mistake in believing his countrymen fit subjects for freedom, tried to help the duly elected governors of the different states to keep their seats; a heinous crime against the constitution, that of meddling in the affairs of the sovereign states, and Congress as well as the rest of the country raised the dickens of a row. But Juarez, Lerdo, Gonzalez, and Diaz all discovered it to be an impossibility to govern Mexico according to the Mexican constitution. Either the people must change or the constitution must be changed, as they do not fit each other. Many thinkers of today are agitating this important question; but, though it be easier to change the magna charta than to change the people, nobody so far has the spirit to propose such a "sacrilegious action."

As it stands, the constitution is a dead letter, but it sounds good, too good in fact to be true. It is a beautiful and sonorous poem, capable of stirring the hearts of men, but its impressions are soon forgotten. The laws are as they should be for good and righteous people, but for a people in their infancy, with but a hazy notion abou their duties, the Mexican magna charta is far ahead of its time. It works the wrong way, by impos-

ing restrictions on the rulers and the servants of law and order, leaving the untutored savage people free to do as they please. For this reason, the president and those under him must ignore the constitution, if they will govern well.

Regarding the e ections which are to be held in October, I can not see how it is to be done. It s very foolish for the Washington officials to expect it.

How can people vote according to their conscience (granted that they have a conscience), with the polls surrounded by armed gangs of cutthroats? Or does Washington believe that, to please the hated "gringos," the wolves will change their bristles for lamb's wool?

Why, when there was some semblance of peace, during Madero's time, has it not happened that certain *jefe politicos* accused men of being bandits and had them shot, because they did not vote the tickets favored by them? The case of Misantla, Veracruz, was not an isolated one, by any means. And how easy is it to put a man who has a strong following of voters in jail until the elections are over, coercing in the meantime his ignorant followers to vote the opposition icket!

And suppose Huerta was to get out and let the people do as they please, then what would happen? Carranza wants to be president, but he hardly can count on the support of Maytoreno and Pesqueriro or Zapata. Maytoreno and Pesqueriro consider themselves as strong as, if not stronger than, Carranza, but are pitted also against each other, owing to political jealousies. Zapata is for none of the three, and none of them are for Zapata, and the other, lesser, factions will contribute to make the situation more incongruous still. Let it be understood that there is no organized revolution, as every one of the factions in the field is contending for its own immediate ambition and does not care for each other a fig.

If Washington has really the welfare of this country at heart, it does not need to trouble about interfering, as it would be a great deal cheaper to recognize Huerta and his government—not out of love for Huerta, but as a good and sound political principle. The United States has weakened Huerta's action too much entirely by withholding recognition so long, and its present attitude has helped the revolutionists of the different factions not a little.

Mexico needs a strong and ruthless hand to reestablish peace, and for that we want Huerta. Once peace is established, it will need a strong hand to maintain it for at least three generations, time sufficient to educate the people regarding their duties. And that the people are amenable to reason when once educated, can be proven beyond a doubt. I myself used to be pessimistically inclined about it when observing the peon class in the rural districts, but the Mexican railroadmen, who are an educated class, have shown themselves in spite of prognostication to the contrary, to be able and willing workers, and far more respectful and gentlemanly than the foreigners whose places they have taken; and they stand out today as examples to their brothers and honor to their country.

A. R. Hollmann.

Colima, Mexico.

PHYSICIAN AND DRUGGIST

There are, indeed, many sides to the question of the dispensing physician, and in fairness we must consider them all.

Of late, a large number of bills have been introduced in the various state legislatures, as well as in Congress, which pretending to prevent the sale of narcotic drugs to addicts in reality are measures favored by the pharmacists to compel the physician to leave all dispensing to them.

Naturally such a proceeding is causing a furore among those physicians who for various good reasons, rarely from a commercial desire for gain, realize that their rights as physicians and as citizens are being impeached.

A hundred years ago, and less, the prescription-pharmacy was an absolute necessity, because the prescriptions of that time called for a host of cumbersome and raw materials and it was next to impossible for the medical attendant to dispense at the bedside.

When Samuel Hahnemann promulgated his "laws" and taught the doctrine of single remedies and small dosage, the pharmacists were active in opposition to him, in which the more narrow minded physicians readily joined. Thereupon laws were passed prohibiting physicians from dispensing.

Since those days of Hahnemann, medicine has been gradually pulling itself out of the darkness of tradition. It has advanced to a wonderful degree, until today our methods of prescribing are upon a scientific basis, our drugs are standardized and reduced to their best form and are put up in compact and handy style, and largely in accurate dosage.

We are not drug-nihilists for the reason that we do not employ a collection of crude drugs. We learn to pin our faith upon certain

remedies and then use these for all they are worth. The result of this progress in medicine is, that many physicians go to the bedside to fight, with a consequent proportionate loss to the druggist's business.

I am now going to tell you of some of the common practices of physicians who only prescribe, and of the pharmacists and of the relation subsiding between certain of these parties. You may form your own conclusions on the subject. One day, when I was in the drug business a prescription was brought in, by a lady, which read thus:

℞. Formula No. ii,-Dr. A.

Naturally I called up the doctor on the phone who then offered the explanation that at the time he saw the patient he could not determine just what medication was needed and therefore had written the prescription in the meaningless way in which it was received at our pharmacy. However, he had looked up the case as soon as the lady was gone and had prepared himself to explain to the pharmacist receiving that prescription exactly what to dispense. And so the doctor went on to dictate his order to me.

Another one of these enigmatic prescriptions encountered under similar circumstances had this appearance:

℞. Antiphlogist. No. x. Ozs. viii.

Sig. Teaspoonful t.i.d P.C. Dr. B.

A printed note in the lower left-hand corner of the prescription-blank advised the patient to take the prescription to a certain pharmacy to be filled.

To fill this prescription, it was necessary for our pharmacy to send a clerk with this prescription to that particular pharmacy and the patient had to pay us both a profit. This doctor had a large list of private formulas with that pharmacist, and I have no doubt he received a certain percentage of the profits. In fact I believe he had an interest in the business.

Nearly all the prescribing physicians advertised one pharmacy or another, but their prescriptions could be filled at any of them. They did this because they believed in the better service to be obtained in the particular pharmacy they favored.

Any prescription that came to us not plainly legible was not filled until the doubt was removed by calling the prescriber upon the telephone; and in like manner the dosage of ingredients was rectified if it seemed to us too large. You would be surprised at the number of cases in which nearly lethal doses have been prescribed either through ignorance or carelessness.

Some physicians were noted for the variety of nostrums they prescribed. I used to think what a waste of good money and time it was for such a man to go to medical college, when he might have learned to prescribe those remedies by reading the labels of a certain few exploited ones, and thus been able to cure every known as well as unknown disease—that is, if we are to believe what the labels tell us.

The physicians prescribing these patent medicines were wont to clothe them in a sort of make-believe Latin, in order to keep the patient from knowing that they were getting a proprietary article. It cost those sick people extra money for that blissful ignorance, for the druggist would change the article from its original bottle to one of the prescription-type, label it according to the physician's directions, then charge for it half as much more than it was offered to the public in its original form.

Many physicians had contracted the bad habit of using our pharmacy for a loafing-place, and there soon gained the belittling title of "doc," because of the too great familiarity engendered.

It is a fact that pharmacists assume the role of physicians, at times, and prescribe for such common ailments as headache, stomach disorders, constipation, diarrhea, minor injuries, and last, though by no means least, the all too prevalent venereal diseases.

One day I was asked by a lady customer, who was slightly under the influence of liquor, to give her some medicine to afford her relief. Her list of symptoms enumerated meant nothing to me, but, to do my duty as a drug-clerk according to the customary rules, it was up to me to sell her something before she got out of the place. So I assured her very confidently that I would help her.

I then gave her two 2-grain tablets of vegetable charcoal and a concoction of cascara with coca-cola to wash them down, and requested her to sit down a while. As the minutes passed I noticed that she was getting more and more uneasy and soon began to assure me that she felt so very much better that she must have some more of those wonderful tablets. Having had her will, she hastened away. I had made a profit for the store of about 22 cents on a 25-cent sale.

I am now looking forward expectantly to the time when the prescribing department, that is, the purely prescribing department, of the pharmacy will give way to an analyt-

ical laboratory, when the pharmacist will aid the physician in diagnosis as well as in treatment.

Wm. Rae Young.

Shelbyville, Mich.

THERAPEUTIC HINTS AND QUERIES—INFLUENZA, WHOOPING COUGH AND OTHER AILMENTS

During an epidemic of influenza through which we were passing, I found the antizymotic combination which follows very helpful: Brucine, gr. 1-128, quinine hydroferrocyanide, gr. 1-12, calcium sulphide gr. 1-6, aconitine, gr. 1-3000, this being given in connection with calcium sulphide to saturation. Of course other remedies were employed as indicated in the individual cases.

One case, with serious lung complications following in the wake, baffled me. I advised living in a tent, the patient residing in the mountains at an altitude of 7000 feet. The weather being rainy, he hesitated. Taking things into my own hands, I made a call and in a gentle way told the people that I wanted the tent, for I was going to put it up and put the patient in it. Of course, I explained all over again what it would do for him, and so the family consented.

Within one week the patient showed marked improvement, while he had been at a standstill for six weeks prior. After but three weeks in the tent, he now is full recovered; and told me the other day that he never was going to sleep indoors again. Rocky Mountain air in this section is a great boon to the tuberculous. However the patient in question did not respond to the test.

In treating pertussis, what results do the "family" get? What remedies do you use? Please report all you can on the action of silver iodide; I find it to modify the course in some of my whooping-cough cases. Saturation with calcium sulphide failed to immunize, in my hands. To me this is one of the most horrible diseases of infancy.

Three cheers for the man who has said that the general practitioner is the real hero of medicine, and not the surgeon. Just recently I saw a case of severe hemorrhage. A woman had been to see me about a serious discharge and I suggested a bimanual examination, but this she deferred to some later time. I saw her again a few weeks afterward, when she claimed to be better. Then shortly after this I had to go to her home, as she had a bad hemorrhage, and at the time of my arrival she was almost bloodless.

A hurried examination revealed a pedunculated fibroid of the size of a large fist protruding from the cervix, and I advised immediate operation. The husband consented and took the woman to Butte, where a very good surgeon did the work, who heartily indorsed my diagnosis and suggestions. The operation of course was a very simple affair, surgeon's fee, $150.00. My fee, $5.00. Family very well pleased.

Now suppose I had been incompetent, and had not recognized this condition, or, thinking to make more out of it, as I have heard other doctors say, had kept the woman on local treatment for a few weeks. In that case I would have made more out of it. This is one of those instances where ability was not properly rewarded. You suggest that I do this work myself. I reply, these things, I feel, should not be risked in the home. Then there was a possibility that a hysterectomy might have had to be done.

What do the "family" do for club-foot? At what age do you start treatment and what material do you use for splints or braces in an infant?

A steel sound passed several times is curative in some chronic cases of gonorrhea in the male.

Tincture of iodine, locally, in ringworm, after first touching with strong carbolic acid, does the work.

I have tried out the alcohol and spirit of camphor mixture as a surgical dressing and found it fine, better than anything else so far used.

F. E. McCann.

Salesville, Mont.

[In his remarks about the alcohol and camphor-spirit treatment of wounds, Dr. McCann refers to the article by Dr. Beverly Robinson that appeared in this department last year, on page 765. For the benefit of recent subscribers we will say that this mode of wound disinfection was introduced by Nelaton.

While sometimes full-strength alcohol is employed, ordinarily gauze or cotton is soaked in a mixture of 1 part of alcohol and 3 parts of water and applied to the lesion; this preferably, then being covered over with rubber tissue. In place of the plain alcohol, sometimes the spirit of camphor is used advantageously. Dr. Robinson ascribes to this dressing virtues equal to those of mercury bichloride. He says it is far more healing, and without the latter's drawbacks, and he strongly urges surgeons to give it a fair final.

Dr. McCann's experience with calcium sulphide differs from that of many others. Perhaps he failed to push it hard enough, or neglected eliminative measures. However, it is not infallible, of course. Dr. Paul Cramer has recently been having great success with solanine in pertussis. Others should give this remedy a faithful trial.—Ed.]

TWO BACK NUMBERS OF CLINICAL MEDICINE WANTED

From several physicians who bind their journals, we have received requests for copies of Clinical Medicine for October, 1894, and for May, 1910. Our stock of these numbers is entirely exhausted. Can any reader of Clinical Medicine help us out? If so, we shall be glad to pay twenty-five cents for each of the numbers named or, in lieu of this payment, will advance their susbcription for the journal for two months for each copy.

ENCYSTED FETUS OF EIGHT YEARS' STANDING

The following account was written by my father, Dr. A. J. Mayfield, some years ago and was published in a local paper. The operation was performed while I was away at college, so I cannot supply additional details.

Mrs. Amanda Garner was operated upon January 14, 1907, by Drs. A. J. Mayfield and D. A. Parker. Upon opening the abdominal cavity, they found a tumor weighing twenty pounds which had been carried eight years, apparently growing no larger, but becoming harder. In this tumor a fully developed female child was found in almost a mummified condition, but beginning to decay in several places. In one place this had broken through the involucre, and the patient had been absorbing this decayed material.

The patient was twenty-seven years old. She was married, at the age of 17, in August, 1898, and expected to become a mother in July, 1899. In March, two months before the expected happening, she was taken ill suddenly, but recovered after a period of two weeks. The expected did not happen, but the patient felt some pain, which continued up to the present time, eight years afterward. Although she was confined to her bedroom for about two weeks at the time of the expected confinement, she has, since then, enjoyed fairly good health. She was able to do her own work until a few weeks before the operation, when she was taken with much pain and suffered in many other ways, and failing rapidly.

Her recent sufferings led her to consult Dr. D. A. Parker, who called in Dr. A. J. Mayfield, and in the consultation Dr. Mayfield diagnosed it as an encysted fetus; which proved correct by the operation. The cyst, or cover, containing the child was as much as an inch in thickness in some places, while at others it was as thin as paper, and it was at one of these thin spots that it had broken through. Dr. Mayfield thinks the child would have weighed 9 or 10 pounds if it had been born at the proper time, and shows now to be well formed, weighing 8 pounds when removed.

There can be no possible doubt of the tumor having been carried since a year after her marriage to her first husband. The thickness of the cyst, the mummified condition of the child, and, besides, the appearance of the patient did not change from the time of the expected confinement, almost eight

The Fetal Cyst (above) and the Mummified Child, just removed (below).

years ago, to the time of operation last Monday.

C. B. Mayfield.

Gilman City, Mo.

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA

The next meeting of the Clinical Congress of the Surgeons of North America will be held in Chicago, November 10 to 15. This association was organized only three years ago, but already it has become a power in American surgery. It differs from other associations in that its work is largely practical. While a few important papers and lectures are given, the special feature of these meetings is the preparation of hundreds of surgical clinics by the best men of the profession, so that any physician attending has an opportunity to see pretty nearly every kind of operative work.

At the coming meeting of the association, the newly organized American College of Surgeons will be formally installed. If you want to get in with this organization, it will pay you to keep in touch with it.

AMEBIC DYSENTERY: CALCIUM SULPHIDE EFFECTS A CURE

I did not realize the extent of the ravages of amebic dysentery til I read the little item in *Helpful Hints*. Perhaps the recital of my own son's case may prove of interest. It was evidently sporadic, for no other physician in that part of southern Oklahoma had met with a case before; and they were of good competency.

The diagnosis was, emphatically, clear. It was an acute attack, very severe; he lost much blood, was irrational from the third day. I tried faithfully the remedies recommended in textbooks and by reliable authors including ipecac. Some recommendations seemed singularly futile, as, for instance, colonic flushings—how can injections reach the germ burrowing under the intestinal mucous lining?

The patient (age 18) was growing rapidly worse, something—something promising help—had to be done. I reasoned that calcium sulphide, having the reputation of being a reliable systemic antiseptic, especially a a germicide, might be the agent I needed. Procuring a liberal supply of trustworthy calcium sulphide tablets as quickly as the mail could bring them, I proceeded to saturate my boy with this agent. I gave him six granules (1-6 grain each,) in a capsule every hour, for the first ten doses, but then had to reduce to four. After full saturation, not such large dosage. I prescribed no other remedy.

After the lapse of twenty-four hours I thought I saw a little improvement, and in forty-eight hours I was sure this was so; and from that till recovery there was not a day of even partial relapse. The sickness lasted nearly six weeks. The calcium sulphide was used (nothing else) four weeks, with gradually decreasing dosage.

Besides its being a systemic germicide, I also had the idea that the sulphureted gases in passing through the intestinal canal would be of more use that flushing of the colon; catching, as it were, the germ front and rear, through the circulation and the tube. *Quien sabe?*

As regards emetine, its efficacy lies, possibly in its ability to unlock and stimulate the secretions—certainly a very valuable physiologic assistance. As a germicide, however, the calcium sulphide served me well in one very desperate situation.

F. O. Broady.

Buxton, N. M.

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[This is certainly a valuable observation, and of a kind that we are most anxious to get. If calcium sulphide will cure amebic dysentery then more physicians should be using it, and we hope that many who read this article will experiment and report.

As to what emetine hydrochloride will do there is now little question. It seems to have a specific influence upon the ameba coli, very similar to that of quinine upon the hematozoon malariae. Indeed, Veddar has shown that *in vitro* it kills this organism in a 1 to 10,000 dilution; and probably a much weaker solution than this is amebacidal.

Under the circumstances, in any *pronounced* case of amebic dysentery we should advise the immediate use of emetine; but there is no objection to employing calcium sulphide conjointly to "make assurance doubly sure." In the mild cases calcium sulphide alone may suffice. There is opportunity here for a lot of beautiful clinical work.—Ed.[

AN OPTIMISTIC VIEW ON ASTHMA

It is my belief, based upon quite a large experience in its treatment, that bronchial asthma is not a disease to be feared, neglected or shunned, although it is so considered and treated by great numbers of physicians. If

this sentiment were not so universal, it would not be so unfortunate for the patient. As it is, an asthmatic goes from one physician to another, attempting to find one who will become interested in his case and give him encouragement and satisfactory treatment.

This search is altogether too often in vain, and it is not surprising that sooner or later he becomes convinced that physicians have little confidence in curative remedies for his trouble. He then betakes himself to drug-stores for inhalation powders, knowing that they at least will give him temporary relief; not knowing, however, that by the use of them each attack is made more severe than the preceding one, and that eventually he is to become a wheezing, coughing, barrel-chested asthmatic.

When physicians are found who take the time and trouble to examine these patients, they generally find some irritated mucous membrane; which has an important bearing in the case, although a comparatively small number depend upon circulatory and other disturbances.

This irritation exists in the nose, throat, bronchi or gastrointestinal canal, and is not an irritation peculiar to asthmatics only. The same identical conditions, so far as the mucous membranes are concerned, frequently are seen in those who have no asthmatic difficulty whatever. Hence, it is reasonable to assume that something more is necessary to produce the disease; and that something I believe, is an impressionable and perverted nervous system, made so by being in communication with the inflamed or irritated mucous membrane. When we add to this the idiosyncrasy to certain irritants, we have all that is required to produce the dyspnea.

It seems to me that all these causes are found and are capable of proof in every asthmatic, and that we do not get the disease until we get the triple combination present. The first and last certainly are matters of common observation, for the asthmatic with nasal obstruction will practically always be improved after operative intervention, while a change of locality commonly makes the disease quiescent for a time, and sometimes permanently even if all internal causes still exist.

For treatment, when the cause is in the upper air-passages, it may be best to send the patient away from the source of irritation that is peculiar to his locality; but frequently this can not be done, and then it becomes necessary to treat existing conditions.

Those who have nose and throat trouble should have any abnormal conditions removed; those who have dyspepsia, dilated stomachs, constipation or acidemia should not only receive proper treatment, but should be as careful of their diet thereafter as should any diabetic.

Removing the patient to another locality or removing the internal irritation does not constitute complete treatment. Remedies are required to remove the bronchial cough which may not in any way be responsible for the disease but which has progressively increased as a result of the repeated paroxysmal attacks, exactly as reconstructive tonics are required to build up the nerve-centers so that they will take less notice of reflex impressions.

If only resistance to these impressions can be established by stimulant and reconstructive tonics, the pernicious habit of asthmatic paroxysms will be broken and the patient will be comparatively free as long as this resistance is maintained, but he still will be in constant danger of retrograding unless the offending cause is found and removed.

I believe the three causes heretofore mentioned are active in producing asthma and that the trouble will not usually be produced by any two without the presence of the third. For many years I have recognized this triple combination and have formulated my treatment with the idea of removing at least one of the causes. And my results have been abundantly satisfactory.

F. A. Southwick.

Stevens Point, Wis.

HINTS REGARDING ASTHMA

Bronchial asthma, distinct from other dyspneas, is purely a neuropathic affection without any appreciable lesion occurring in the otherwise vigorous and healthy. The susceptibility is inborn, manifesting itself in later life when the stomach deals with coarser foods the imperfect and difficult digestion of which frequently becomes the underlying factor, producing irritation that reflexly expresses itself in a paroxysm of asthma.

This condition, of course, obtains only in the susceptible and may not occur in a suitable environment, and, futhermore, may require other factors at various intervals to contribute to its excitation. Where attacks have been frequent, their occurrence has been arrested by the appearance of an attack of lumbago, albeit complicated with bronchitis; the irritation apparently being trans-

ferred to the muscles. Low diet, not medication, contributed to the result. Did you ever know a doctor who took his own medicine.

Bronchial congestion, with exudation of mucus, lead up to a spasm of the muscular layers of the bronchioles, so constricting their lumen as to produce the obstructive dyspnea forming the clinical picture of asthma. Recurrences are more frequent and persistent in the presence to an acute bronchitis, although the chronic form by depletion and lowering vitality operates conversely.

Bronchial asthma and robust health form a twin alliance! The vaunted cures I ween are myths. Asthma owing to nasal disease is amendable to curative treatment, Laparotomy with mutilations and adjustments of a female pelvic organs, which was promised to afford relief, proved a flat failure. Sure!

Pure air (night and day), eliminants, light digestible food, the fast full meal not later than 2 p. m., the avoidance of air-borne irritants, of pollen toxin, of chemical fumes, dust, irritating smoke and odors and of excitants that are myriad, even north winds, form the most potent prophylactics extant. Easy!

Antispasmodics abort the spasms—to wit: atropine, apomorphine (combined with strychnine), lobeline sulphate, hyoscyamine, and emetine; each hypodermic dose of the alkaloids being combined if indicated with nitroglycerin, and strychnine till effect. One dose may be sufficient. Leave morphine, if not adrenalin, in its own tubes. If acute catarrhal conditions complicate, have resort to potassium iodide and ammonium carbonate or chloride, or calx iodata; also emetine. Continue with hyoscyamine and lobeline, if required.

Aspidospermine and other remedies recently extolled I have yet to try, but lest ye forget the slogan, "Clean out and keep Clean," your efforts may be vain! With what? Saline laxative, of course, and calomel, podophyllin and bilein.

Freshly powdered stramonium leaves and powdered niter, burnt in a small room and the smoke inhaled, often is effective. One-fourth of powdered cubebs, if not too strongly impregnated with its oil, may be added. For years, without any other remedy but tobacco smoke, this was my sheet-anchor. Every case has its own law, and for nigh half a century I found my law inexorable, and may yet learn it is not anothers.

MORRIS HARVEY.

Fruitvale, Calif.

[Dr. Harvey's suggestions are excellent. Who can improve upon them?—ED.]

APOMORPHINE IN CHOLERA MORBUS

Being called to see a man, 50 years of age, I found him very much nauseated, and vomiting and purging at intervals of twenty or thirty minutes; also complaining of cramps in the stomach, the pain extending down his legs.

I prescribed small doses of calomel and bismuth subnitrate every hour till the actions changed. I also gave a preliminary hyoscine, morphine and cactoid tablet hypodermically. A few minutes after administering this latter the patient said, "Doctor, I feel awful sick." Something in the situation caused me to look again, and discovered I had given him 1-10 grain apomorphine. The patient made a few attempts at vomiting, but within an hour turned over and went to sleep, and was well in a day or two.

J. J. CHAPMAN.

Duncan, Okla.

UTERINE BLEEDING FROM PLACENTA PRÆVIA

Tamponage for uterine hemorrhage due to placenta prævia is condemned by L. Ledigmann (*Fortschr. d. Med.*, 1913, p. 91, through *Zentralbl. f. d. Ges. Gynaekol.*, 1913, p. 103) because of the possibility of infection. Instead, he recommends, as the simplest measure, tearing of the amniotic sac and combined version according to Braxton-Hicks. When technically this is impracticable, as also in absolute placenta prævia, he makes use of the metreurynter, that is, the inflatable rubber sac. For obstinate postpartum hemorrhages, he has had good results, latterly, from secacornin and pituitrin.

ECHINACEA IN SEPTIC CONDITIONS

In your editorial in the August number, you ask for a report on echinacea by those who have used it. I have been employing echinacea, in fluid-extract and tablet form in septic conditions, with excellent results, including septic conditions following confinement and septic conditions following other local infections.

Only the past week a boy of ten years was brought to me, who had a thorn in his toe, a bright-red streak extending from the toe to his knees, with "kernels" in the corresponding groin. I removed the thorn, instructed

the parents to apply a flaxseed poultice to the toe and put him to bed. I gave him calomel, and podophyllin, in small doses every hour for four doses, to be followed by magnesium sulphate two hours after the last dose. Also, two tablets of 1-2 grain each of echinacoid every hour.

I saw the patient next morning. The red streak had almost faded away and the nodules in the groins were diminished in size and tenderness. I carry a goodly supply of echinacoid in my case and when I get a case of sepsis from any cause I give it to saturation, along with the clean-out and clean-up treatment.

Success to CLINICAL MEDICINE.

WARREN C. DAVIDSON.

Sedgwick, Colo.

CAN YOU LIVE ON THREE HUNDRED DOLLARS A YEAR?

Your leading August editorial on "Getting Down to Business" reads to me like a fairy tale, and, as you tell us that only three doctors reported taking in less than $1000 per year, perhaps my story will interest you as well as some of your readers.

I was graduated from the University of Pennsylvania in 1868. I was hospital interne and dispenser until the fall of 1870, when I was appointed for four years to the Santee Indian Agency in Nebraska, at $1000 per year. I took government land and built a home with my savings, moving there in 1875. My living was derived from the farm, for drouth, grasshoppers, and the recent settlers starting out on new farms made cash in the country a rare commodity and life strenuous.

My income from practice, compared with that of the parson, was $150 as against $250. In 1888, my collections reached $335; in 1890, $385; in 1894, they went down to $216. In January, 1900, I moved to Virginia, leaving my present home, to escape the rigorous winters. There, although I was kept as busy as a new broom, I collected just $61.42 during the year and spent $75.00 per month to live, which exhausted my little surplus. In 1901, I collected $213; in 1902, $444; in 1904, $635—the best since leaving the government job. Since then it has been as low as $438. I have always owned my home and kept a cow and horse. I was always economical and knew the value of money.

I often wondered how other doctors managed to smoke cigars, live high and be sporty. I raised a family of eight children, who always went in the best company and dressed becomingly. I never had the trick of keeping patients in bed. My practice was mostly in the office, always dispensing the remedies, and got from fifty cents to one dollar as my fee. In all my years of practice I have had but three cases that brought $100 each. They were old people, whom I kept alive beyond their time. My pneumonia cases are always aborted, my typhoid cases never go over fourteen days, and, if sent for soon enough, never over four or five days.

How can I make money under such circumstances? I will soon be 67 years old. My children are all married, but one, and doing well. This month, August 1 to 20, I took in just $3.00, and had twelve in the family to feed. We had plenty to eat, and all enjoyed themselves, and, yet, I am not owing a store bill. How is that for financing?

GEORGE ROBERTS.

Lincoln, Va.

MISTER FLY

After thousands of years, the World has woke up to the fact that the common housefly is a terrible public enemy! According to modern reports, he is man's worst enemy. He is a dark-browed, low-browed or any other kind of a "browed" assassinator. He lieth in wait for *you* his common enemy. With studied cunning and malevolent joy he abideth his time when in the midnight of tragic gloom he can "run you home, under the fifth rib." Such is the modern theory, and warfare has been declared against this little homely visitant.

For ages upon ages Mr. Fly, and his little enterprising wife, abided among us. Away down yonder in Egypt, centuries before the Master was born, this little pest was known among the sons of men. He had tremendous energies there. In Greece; in more modern Rome, "where Ægean waves and Tiber's swirling eddies" were known to men, has this little past-master of fifth been known.

But here, in this modern age, this twentieth century of enlightened learning, there has been no voice that lifted itself up in charity for little Mr. Fly. The slogan, "swat the fly," has gone from shore to shore, from ocean to ocean; and there have been none to lift up their voices in praise of the work that he has done or accord him a place in the economy of life. "Swat the fly," and still, "swat the fly" is the drearsome dole heard from hill to hill and from vale to vale.

Now let's take a cursory glance into all this recent fadistic cry about swatting the fly, etcetera, and try to get an understanding as to what there really is in it.

I want to premise by saying that there is, not, or ought not to be, any excuse for the fly's existence; but, since he is here, he is a distinct agency for good. Had you ever thought of that? Do you stop to consider that every and anything on this earth, in the economy of God's providence, is *not* purposeless?

What, then, say you, can be the possible purpose of the house-fly? Listen. This atmosphere we breathe is charged, and surcharged, with all the filthy miasmic vapors accruing from filth and decay. Mr. Fly is a scavenger—he is born of filth, and therefore, 'tis his business to revel in it. To gather it up in concrete form, as it were, this miasmic putrid filth afloat in the invisible air and consign it back to dusty nothingness! The fly is the universal scavenger. The thing is not so much to "swat the fly," but to "swat" the conditions that make his existence necessary or possible.

F. B. Cullens.

Ozark, Ala.

SCHOOL FOR HEALTH-OFFICERS CONDUCTED BY HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Beginning this fall, Harvard University and the Massachusetts Institute of Technology are to maintain, in cooperation, a school for public-health officers. The facilities of both institutions are to be available to students in the School and the Certificate of Public Health (C. P. H.) is to be signed both by President Lowell and President Maclaurin.

The object of this School is, to prepare young men for public-health work, and, especially, to fit them to occupy administrative and executive positions, such as those of health-officers or members of boards of health, as well as secretaries, agents, and inspectors of health-organizations.

It is recognized that the requirements for public-health service are broad and complicated, and that the country needs leaders in every community, fitted to guide and instruct the people on all questions relating to the public-health. To this end, the instruction of the new school will be on the broadest lines. It will be given by lectures, laboratory work, and other forms of instruction offered by both institutions, and also by special instructors from national, state, and local health-agencies.

The requirements for admission are such that graduates of colleges or technical and scientific schools who have received adequate instruction in physics, chemistry, biology, and French or German may be admitted to the School. The medical degree is not in any way a prerequisite for admission, although the Administrative Board strongly urges men who intend to specialize in public-health work to take the degree of M. D. before they become members of the School for Health-Officers.

The Administrative Board, which will conduct the new school, is composed of Professor William T. Sedgwick, of the Massachusetts Institute of Technology; Professor Milton J. Rosenau, of Harvard; and Professor George C. Whipple, of Harvard. Professor Rosenau has the title of Director, and the work of the school will be under his immediate supervision.

FEWER PHYSICIANS NOW

One of our correspondents sent us the following newspaper clipping, which is of interest.

"The number of physicians and especially women physicians is decreasing rapidly each year. The explanation given is that the rapid advances in medical science and the skill of doctors is diminishing the amount of sickness. Persons are seeking other fields.

"The *Journal of the American Medical Association* says: 'The total number of medical students in the United States for the year ending June, 1911, was 19,786, a decrease of 1,740 below 1910, a decrease of 2,359 below 1909, a decrease of 2,816 below 1908, and a decrease of 8,356 below 1904. Of the total number 18,414 were attending the colleges of regular or allopathic medicine. 890 the homeopathic; 433 the eclectic and 49 the physio-medical. The latter college went out of existence during the year 1911.' "

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

IT is worthy of notice here that many young women are very subject to pain in the side about the middle of the false ribs. This fact commonly is connected with some derangement in the health, with poor blood, and sometimes with a more or less lateral curvature of the spine. Depleting measures by no means are proper in this affection, which is most certainly removed by those measures that tend to invigorate the system, and establish the general health.

Sometimes these pains are confined to the region of the heart, but frequently they extend concomitantly or vicariously over a greater or less portion of the lungs and stomach. Sometimes they exist simultaneously in the superficial nerves of the neck, and extend along the tract of the branches supplied by these to the anterior parts of the chest.

Still more often at the very time they are felt most severely in the heart, they shoot with corresponding violence along the nerve of the armpit, and more particularly along the nerve of the arm to the elbow, sometimes even as far as the fingers, then simulating the organic affection called breast-pang or angina pectoris. It is of consequence to observe that this affection sometimes so strongly resembles the organic disease called angina pectoris as to require the aid and exercise of considerable judgment to distinguish one from the other. This latter fact should inspire the victim of angina with hope and induce calmness and composure, at the same time leading the medical attendant to offer his opinion cautiously and with some reservation in the majority of instances. Neuralgia is met with much more frequently in some years than in others, and it seems that the prevalent type of disease influence its development.

As to treatment, generally speaking, whatever has the greatest effect toward invigorating the system and restoring all the functions of the body to a state of healthy action will be most uniformly of the greatest service in the treatment of neuralgia.

Among the drugs commonly employed for the relief of these conditions, we have various combinations of the coal-tar products (antipyrin, phenacetin, acetanilid) with the bromides and caffeine; while among the older drugs of well-known reputation aconitine, gelseminine, and cannabis indica, next to the coal-tar products, are greater in their ability to relieve neuralgic pain than any other, whether the neuralgia be mild in character or as severe as that met with in migraine.

Then, too, it must not be forgotten that in many of the cases of neuralgia depending upon poor circulation and nervous exhaustion full doses of strychnine will produce valuable results, although that measure cannot be relied upon to be of any permanent advantage when discontinued from other supporting treatment.

Cicutine is another valuable drug in the neuralgia affecting chlorotic girls. Gelseminine is especially valuable in congestive neuralgia, while in diathetic and intercostal neuralgia of exhaustion, both strychnine and atropine are valuable. Ovarian neuralgia usually yields to gelseminine, atropine or macrotin. Visceral neuralgia also will yield to these drugs; but, if the trouble seems to be in the rectum, esculin acts very well, indeed. Ocular neuralgia yields temporarily to physostigmine or hyoscyamine, although, if the neuralgia results from some eye-strain capable of being corrected, an oculist should be consulted.

A combination of remedies that without doubt is of much value in various neuralgias depending upon malarial intoxication, and which also does good in neuralgic pains not rising from that cause, is a combination of a few grains of quinine with a minute dose of morphine; the only objections being that the patient is in danger of becoming addicted to morphine.

We have another drug that undoubtedly is of very great value in certain forms of neuralgic pains, particularly those in the head;

namely, chloral and butyl-chloral, the latter drug being especially valuable in facial neuralgia and neuralgia from carious teeth. The ordinary hydrate often proves of singular service where other remedies have failed. It is a noteworthy fact though, that in reflex dental neuralgia chloral hydrate seems to be of less value than in other forms of neuralgic pain affecting the branches of the fifth nerve, being practically useless for stopping toothache. One additional advantage of this drug is, that it causes a tendency to sleep, which is beneficial in many instances.

In all persons having atheromatous blood-vessels and high arterial tension who suffer from violent neuralgic pain affecting the fifth nerve, very great good can often be accomplished with full doses of nitroglycerin administered simultaneously with full doses of strychnine.

In addition to various measures enumerated local freezing of the tissues surrounding the superficial nerve (by means of a fine spray of ether or of ethyl chloride will be efficacious. So also, the use of ice and salt is not to be forgotten, while in other instances a high degree of heat, locally applied by means of a big salt-bag or other warm object will relieve.

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In neuralgic pains of deep-seated nerves, massage, in the neighborhood of the nerve and over its course, with a round glass rod which will dip deeply down into the tissues, often is very useful, particularly if an ointment containing menthol is smeared over the part, to lubricate the skin and exercise the benumbing and counterirritant influence, of this derivative from peppermint oil; and in still other cases, a continuous galvanic current of electricity will give great relief.

I wish to remind the reader that many cases of neuralgia are due to toxemia of some sort or another. Then, at times, there will be a uricacidemia, the overcoming of which will cause the neuralgia to disappear. The urine should always be examined. Free elimination by skin, bowels, and kidneys should be maintained. Many victims of obstinate neuralgia can be entirely cured by cleaning out their bowels and rendering their blood more alkaline, overcoming acidemia by means of saline laxatives and alkalis.

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Spend years searching for a woman you won't get tired of, and she will be the first of the lot to get tired of you.

Marriage with all its drawbacks has its merits. It's something new for single men to try, it's sanctioned by the most respectable, and if you can't afford to pay alimony it's easy enough to quit.

When a man wakes up to what married bliss is costing him, his old club bills must seem like canal-boats in a cup-race.

—

Scowl and frown every now and then, for nothing has less value than the smile of a man who always grins.

Too much thinking leads to worry; too much planning ends in disappointment; too much ambition destroys the last hope of happiness.

Happiness is most easily attained by being contented with one's surroundings; but to be contented with most people's surroundings would require a degree of complacency that would reflect discredit on a hog.

A man might as well talk of going on his honeymoon alone as to hope to accomplish any good by worrying.

People who make doormats of themselves must expect to have feet wiped on them.

—

The reason why most people are willing in the end to admit their life a failure is, because their ideals were too lofty in the beginning. If we could only start out with the understanding that a man is a twolegged beast, we would save a lot of time and have a heap more fun.

An electric fan will buzz away all day and blow off a lot of wind, but it never says anything.

The strenuous life may be an excellent policy for some, but the really great man does not have to rush about and fume to accomplish things. Most strenuous men, as a rule, are like feeble old switch-engines that puff up and down all day doing nothing but little things.

When you have the blues remember that, while you may not feel any older than you did yesterday, you are twenty-four hours nearer the grave.

When a confiding friend sneaks up to you on tiptoes and draws you away from a crowd cautiously to whisper a secret in your ear, and then begs you not to repeat it to a soul, you can be perfectly certain that everyone in the party has heard it—or will in a few minutes.

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Those who start out being too independent usually end up with being completely dependent.

Worry is fear, and fear is an admission of inferiority.

The best way to brighten your life is to try to brighten someone else's.

You know it is not what you know you know, but what others think you know, that counts.

The way to find time to do everything is never to let time find you doing nothing.

Don't aim too high, and your hopes won't have so far to fall.

The way to do a thing is, to *do* it.

Dissect life to the bone, and you may prove to yourself that it's not worth while—but here we are, and so, why not make the best of it?

A rich man has a difficult task avoiding notoriety; but the ordinary mortal who enjoys seeing his name appear extensively in type must commit some awful crime, save a millionaire's life or recommend patent medicines.

Friends are like titled husbands, pedigreed dogs or racing automobiles—easy to get if you have enough money.

A tip is either a bribe to make a waiter give you something you are not entitled to, or blackmail to keep him from insulting you for receiving what you order. There's no use kicking. Either pay or stay out—it's part of the game.

Poverty is not without its reward. The man who has to shine his own shoes need never fear dyspepsia nor a breach-of-promise suit.

There is only one thing worse than dishonesty—incompetence.

The difference between a natural and a cultivated liar is, that the former believes his own lies.

Life is a good deal like a seesaw, and it pays to be decent to the fellow who is down, for he may be up tomorrow.

There are lots of blanks to be drawn; so, if you get one, don't be disgruntled—it won't do a bit of good. Just take what comes and smile.

Men hate to be thought sentimental, but the gruffest have a lock of hair, a lace handkerchief, or a faded photograph hid away somewhere.

A good fellow is like a big-hearted ass When he wants half done for himself that he gladly does for others he gets nothing.

Geniuses may go about unshorn, but don't try to measure all men's brains by the length of their hair.

The hardest work an energetic man can do is to loaf.

A man is worth what he gets, for the simple but very excellent, reason that he does get it.

Conservative men are like paper-weights—they hold things down, but seldom move.

If you want to end a quarrel with a woman, don't try to convince her that she was wrong, Just send her a little present and shut up.

There is nothing more admirable in the abstract than truthfulness; but the man who always insists upon telling the whole truth is as much of a nusiance as a woman in a fishing party

Some women talk a lot about wanting their own way, but with most of them this is a reflection on their masters. Nearly every woman prefers to be bossed. It all depends upon the way it is done.

If you want to flatter a woman, pour your sweet things into her own little ear; but if you want to jolly a man, make your complimentary remarks in the hearing of a big-mouthed friend of his.

When a man touches you for a loan, tell him you are broke. It may be a lie, and he knows it, but he can't say so without admitting that you doubt his ability or willingness to repay.

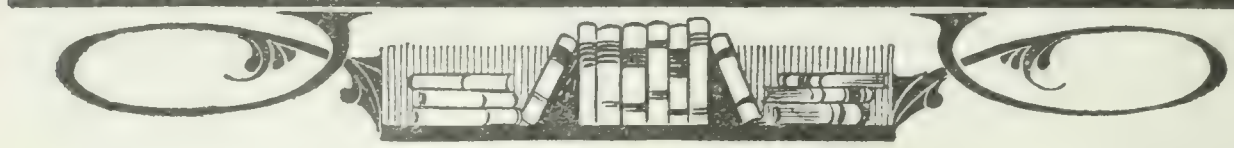
BETTER HAVE YOUR FAMILY PHYSICIAN

Just keep the heart a-beatin' warm;
Be kind to every feller;
Look for the rainbow in the storm,
But—carry yer umbreller!
Be brave to battle with the strife;
Be true when people doubt you;
Don't think that money's all in life,
But—carry some about you!
An' when it's time to shuffle off,
An' you have done yer mission,
Just put yer trust in Providence,
An' call a good physician!

—*Atlanta Constitution.*

Severe pain in or about the heart, with paroxysmal sinking-spells and anxiety, if coupled with a muffled sound at the base of the heart or with the aortic sound more pronounced than the pulmonary, is apt to be evidence of true angina pectoris due to organic disease, atheromatous deposits and valvular incompetency. Superficial varicose veins on the abdomen are evidence of deep venous obstruction and may indicate cirrhosis of the liver. A hard, rigid, inelastic femoral artery, the vessel feeling like a small gas-pipe, suggests that gangrene of the foot or leg may be impending in the near future. Continuous headache, either deeply seated in one spot or referred to the whole cranium, is probably evidence of organic diseases.

AMONG the BOOKS



DAVIS: "SKIN DISEASES"

Skin Diseases in General Practice: Their Recognition and Treatment. By Haldin Davis, M. B., B. Ch., B. A. London: Henry Frowde, and Hodder & Stoughton. Price $3.75.

If the average physician in practice knows as little about skin diseases as the reviewer, he will cordially welcome any contribution to medical literature that affords him any genuine assistance in the recognition and treatment of this obstinate and puzzling class of troubles.

We do not know that there is anything new or startling about this book of Haldin Davis', but it is the work of a man who has had long and wide experience in handling diseases of the skin, and, so, it represents an intimate knowledge of the practical end of the subject. Besides, as we have frequently risen to remark, and our language is plain, the Englishman has the knack, more than any other nationality, of saying what he has to say, plainly and helpfully. He is a born teacher and knows how to impart what he knows; more than that, he knows how to impart just those particular parts of his knowledge that are practical and useful. This is the feature in which Dr. Davis' book excels.

Especially illuminating are the differentiations laid down between the various diseases that cause widespread eruption, and which are usually such a bugaboo to the ordinary diagnostician. With this book at hand, we should venture to make a diagnosis ourselves. A higher compliment we could hardly pay it.

LINDSAY: "GOUT"

Gout: Its Etiology, Pathology and Treatment. By James Lindsay, M. D., London: Henry Frowde, and Hodder & Stoughton. 1913. Price $1.50.

The problem of gout, like the poor, we have with us always. And, what is more to the point, the disease itself and the gouty patient are ever present actualities. No disease in the catalog perhaps, has received more attention in practice and in literature; yet, little in the way of definite knowledge seems to have been added to us since medieval times. The fact is, we know but little more about it, if any, than Sydenham wrote his classical treatise.

Only in very recent years has there been a suggestion of innovation in our conception of the gouty process; namely, a disposition to bring its etiology within the all-inclusive pale of microorganic infection. Of this, the author takes due cognizance. "The present-day attitude of observers," he says, "is, that gout is due to certain toxins circulating in the blood and present in the body-fluids, which are the outcome of certain faults in metabolism originating in an altered condition of the gastrointestinal processes.

It has been demonstrated that there are enormous numbers of streptococci in the large intestine, largely outnumbering the colon bacilli. But this aspect of the disease is yet in its infancy—and perhaps a stillborn infancy—and does not lend itself to any very extensive elaboration. For the most part Dr. Lindsay's book is simply a comprehensive presentation of the clinical status of this very obscure and obstinate pathologic condition.

POLAK: "OBSTETRICS"

Manual of Obstetrics. By John Osborn Polak, N. Sc., M. D., With 3 color plates and 119 illustrations in the text. New York: D. Appleton & Co. 1913. Price $3.00.

One would think that there were textbooks and manuals aplenty on the subject of obstetrics, especially considering the fact that obstetrics, in itself, has not undergone any very radical changes or improvements during the past twenty years. Really, almost everything that has happened in the way of obstetrical progress in that period has been a reflection of the progress made in surgery translated into the field of obstetrics and consists in the application of surgical methods to the technic of obstetrics.

With this understanding, the student and practitioner of obstetrics can get almost as much information concerning its actual mech-

anism and conduct out of the older standard works as from the more modern textbooks. Certainly, there is no crying need for additions to obstetrical literature, so far as the practical side of the subject is concerned. The only real *raison d'être* or merit in the manual under review, so far as we can see, is its brevity.

As in every other branch of medicine at the present time, there is a tendency to make obstetrical textbooks too long-drawn out, and a manual which compresses the entire subject into four hundred duodecimo pages will doubtless be welcomed by those who appreciate terseness and condensation.

BOOKS RECEIVED

Practical Cystoscopy; and the Diagnosis of Surgical Diseases of the Kidneys and Urinary Bladder. By Paul M. Pilcher, A. M., M. D. With 233 illustrations, 29 in colors. Philadelphia: The W. B. Saunders Company. 1911. Price $5.50.

Essays on Genitourinary Subjects. By J. Bayard Clark, M. D. New York: William Wood & Co. 1912. Price $1.25.

Diseases of the Genitourinary Organs and the Kidney. By Robert Holmes Greene, A. M., M. D., and Harlow Brooks, M. D. Third edition, revised and enlarged. With 339 illustrations. Philadelphia: The W. B. Saunders Company. 1912. Price $5.00.

Urology: the Diseases of the Urinary Tract in Men and Women. A book for practitioners and students. By Ramon Guiteras, M. D. Volumes I and II. New York: D. Appleton & Co. 1912. Price $12.00.

KNEELAND: "COMMERCIALIZED PROSTITUTION"

Commercialized Prostitution in New York City. By George J. Kneeland. With a supplementary chapter by Katherine Bement Davis, and an introduction by John D. Rockefeller Jr. New York: The Century Company. 1913.

This is the first of a series of four reports (the other three yet to be issued) by the Bureau of Social Hygiene of New York, instituted through the agency of John D. Rockefeller Jr., for the purpose of making searching inquiry into the causes and conditions of vice in that city. It is a most instructive and suggestive report—an improvement, we think upon the one issued by the Chicago Vice Commission, in that it omits a great deal of the circumstantial detail included by the latter body, and furnishes a somewhat clearer and more conclusive interpretation of its data; not that the New York bureau is lacking in circumstantial details; there is enough, and to spare upon its records, which anyone may see who is legitimately interested.

But, after all, the real duty of the Bureau is, not to display the detail to us *in extenso*, but to summarize and interpret it for us, and the New York investigators have well understood their part.

The net showing of the report is, that the whole vice situation represents the social interplay between all that is weak and abandoned in woman amd all that is sensual and lawless in man, of which a vicious commercialism has taken damnable advantage for its own unholy profit. The remedy is, of course, complex and difficult. But the report contains some timely and sensible suggestions in that direction, too, which will be of incalculable value to those who are actively engaged in fighting the evil.

KRAUSE: "NORMAL HISTOLOGY"

A Course in Normal Histology. A Guide to Practical Instruction in Histology and Microscopic Anatomy. By Rudolph Krause, A. O. Professor of Anatomy at the University of Berlin. Translated by Phillip J. R. Schmahl, M. D., New York. With 30 illustrations and 208 colored plates. Part II. New York: The Rebman Company. 1913. Price $5.50.

The Rebman Company is giving us an excellent series of scientific textbooks translated from European texts, of which this by Krause is one of the best examples. It is fitting that a teaching book on Histology should excel in its illustrations, since it is only through the visual faculty that histology can be properly imparted and acquired. And this book does excel in its illustrations; containing, as it does, some of the finest pictorial representations of tissue-structures that it has ever been our pleasure to see.

Really, except for the practical advantage that always accrues from a working-knowledge of the microscope and its adjustment, we cannot see that the actual slides have "anything on" these colored pictures. And, indeed, a great many of them represent preparations that no ordinary student will ever make in the original. And, then, for the many who have neither the time nor the opportunity to prepare their own slides at all,

this beautiful series of plates will serve as a splendid course in microscopic histology.

We desire to compliment The Rebman Company upon the production of this excellent volume, and to congratulate all who, at relatively so low a cost, can own and avail themselves of a work of science and art such as this.

WOOD: "A TREATISE ON PELLAGRA FOR THE GENERAL PRACTITIONER"

A Treatise on Pellagra for the General Practitioner. By Edward Jenner Wood, S. B., M. D., Chairman of the Pellagra Commission, North Carolina Board of Health. With 38 illustrations in the text. New York York and London: D. Appleton & Co. 1912. Price $4.00.

Pellagra, which, so far as this country is concerned, is a disease of comparatively recent study, has had a rapid and checkered history. The oldest conception (and the disease itself appears to be of somewhat ancient lineage) was that of a constitutional disorder or dyscrasia, similar in its etiology and pathology to scurvy—a conception which shared the field with another view, namely, that it resembled leprosy in its causes and character. When the disease began to obtrude itself upon the attention of modern medical men, it was first classified among diseases of the nervous system, and assigned to the department of the neurologist, who, it must be confessed, succeeded in making very little out of it. Gradually, under the influence of special research, the truth began to impress itself upon careful investigators that the nervous manifestations were mere incidents in its clinical course, and the indicator slowly swung round again to the older concept. It is now pretty well agreed that the disease is a nutritional, metabolic disorder, due to some profound disturbance of the body chemistry; but of the exact nature of the disturbance we are still in ignorance.

Dr. Wood, the author of the present book, was one of those who took an active part in running down the true habitat and nature of pellagra. All that he has to say upon the subject, therefore, has a peculiarly authentic value. His book is a very thorough presentation of pellagra, both from the academic and from the clinical standpoint.

One of the most notable features of our later research in the matter is the extension of the geographical distribution of the disease. It can no longer be regarded as confined to a few isolated southern States. While it prevails in the South to a greater extent than in the North, yet we must accustom ourselves to the truth that it has all places and seasons for its own. Nor can it any longer be attributed to musty corn as a fundamental *casus morbi*, whatever incidental part musty corn may play in its etiology. A further truth is very evident from Dr. Wood's able presentation of the subject, namely, that there is still a wide field of investigation to be covered before anything like definite or decisive knowledge can be assumed.

REED: "ORIGIN AND DETERMINATION OF SEX"

Sex: Its Origin and Determination. A Study of the Influence of the Metabolic Cycle on Sex. By Thomas E. Reed, M. D., Middleton, Ohio. New York: The Rebman Company. 1913. Price $3.00.

It seems, at first blush, like a very large book and a great deal to say about a subject of which practically nothing is known. But, when one comes to think about it, that of course is just the very kind of topic on which endless volumes can be written without overstepping the possibilities of the matter.

Dr. Reed has given us a very thorough presentation of the main questions at issues, an equally comprehensive summary of the principal data, and a most judicial estimate of the comparative weight and significance of the data. Furthermore, by means of the extensive and well-chosen references which point his various assertions and contentions, the author has shown us the way to an intelligent excursion through the entire domain of sex-biology, if we are sufficiently interested to take advantage of it. It is, in fact, a decidedly able work, and forms a valuable contribution to the literature of the subject.

In its present status, however, the subject itself is one that has more academic than practical interest for the physician, and the author and publisher must not be surprised if the sale of the book is small, at least among medical men. One of its chapters is of intense and practical significance to the doctor —that upon the metabolic cycle in labor. Altogether too little attention is being paid to biology in current obstetrics; and every obstetrician (which is equivalent to saying every physician) ought to know what is told in this chapter, even though he pass by everything else in the book. It is worth his while buying the book for that chapter alone.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5929.—"Cancerous Womb." Referring to the query submitted by V. S. B., of Connecticut, in the August CLINIC (p. 705), regarding a woman of 80 who has bleeding and a fetid discharge from the wound, I wish to give briefly a few words on my experience in cases of this nature.

Judging from the short history printed, the case seems to border on malignancy, and your suggestions for treatment may do well. However, I would suggest that the mixture named be reenforced by ichthyol (5 percent), or, to use the following: Iodine, grs. 30; phenol (95 percent), dr. 1; boroglyceride, drs. 2; ichthyol, dr. 1; glycerin, ozs. 4.

Now as to the treatment. Cleanse the ulceration with pledgets of cotton, saturated with 2 percent carbolic-acid solution, holding it with the dressing-forceps. Then apply equal parts of hydrogen dioxide solution with warm water, also by means of pledgets of cotton; this dioxide mixture being left on until the bleeding stops. Then apply a medicated tampon to the cervix or the ulcer, whichever it be or wherever located. It will do well in the cul-de-sac, but should be placed carefully, so that the cervix will lie in it as a baby's head lies on a feather pillow. This tampon, before placing, is partially saturated in the boroglyceride-ichthyol solution above described.

The cervix and the walls of the vagina may be painted with a 10-percent solution of tincture of iodine in glycerin before placing the tampon.

The tampon is made of loosely folded cotton, and should measure $2\times2\times\frac{1}{2}$ inches, around which a string is tied with two 5-inch ends, and tied at the end, to form a loop.

The woman is instructed to extract the tampon by introducing her finger through the loop and withdraw the tampon after six to eight hours, as the case may be, then she is to take a douche of 2 quarts of hot water, to which she may add 1-2 or 1 ounce of table-salt. While taking the douche she should lie on her back, with the buttocks over the douche-pan. The fountain should not hang higher than 18 inches. Women must be instructed minutely how to do these things, otherwise most of them will take the douche sitting over a slop-jar. The patient should also be instructed to wear a pad, because there will be considerable fluid drawn by the ichthyol-glycerin tampon.

The dioxide solution is of more value than most physicians would give it credit. If properly applied, it will not only clean, but cause the unhealthy tissue to shrink and heal. This treatment outlined may be repeated every day, but I find that every other day will do and yield good results, provided the patient takes one or two douches on the intervening days.

If there is a foul discharge from the womb, that may be treated by irrigating with warm water containing 2 percent of carbolic acid, using the return-flow catheter; and this may be supplemented with a cotton cone, on the applicator, saturated in a 10-percent solution of tincture of iodine in glycerin.

R. WILLMAN.

St. Joseph, Mo.

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ANSWER TO QUERY 5908.—"Tinea Circinata, or Ringworm." In the August number, in reply to T. D. F. (Query 5908, May, p. 461), G. D. S recommends "sweat of steel" as a sure cure for ringworm. I have used the same substance for many years, and with uniform success; however, I believe I can suggest a better method for obtaining the oil than that by burning rags on an ax. This is my way:

Take a large sheet of writing-paper (foolscap), roll it up into funnel shape, using two

pins to fasten it. Cut the mouth of the funnel even and then stand the funnel upside down on the back of a plate. Now set the apex on fire and let the funnel burn evenly down to the plate. After blowing off the ashes you will find a yellow oil collected on the plate. This oil is applied all over the diseased area. You want to be sure to burn enough paper funnels to produce oil sufficient for this purpose. As a rule one application does the work. I do not know what its composition is, but suppose the oil contains some form of arsenic, and a little creosote produced from the burning paper and condensed inside of the cone. L. L. N.

——, Tenn.

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[Thank you for calling our attention to your method of obtaining this "oil of steel," and adding your testimony of its efficacy. Your explanation seems reasonable. Most paper nowadays is made of wood pulp, and from this, as the products of destructive distillation (combustion), there may result pyroligneous (and, possibly, acetic) acid, phenols, cresols, creosote (from certain woods), and other empyreumatic bodies. You would find it a very tedious process, of course, to analyze your "oil of steel"; for its composition would vary materially under different circumstances according to the wood-fiber used, the manufacture of the paper, the temperature generated, and the amount of smoke thrown down upon the cold plate.

We have found creosote a very excellent remedy in various parasitic skin diseases, and especially a substance sold as pyrolignin has given us good results.—Ed.]

QUERIES

Query 5940.—"Colloidal Palladium in Obesity." E. N., Missouri, forwards a clipping referring to Max Kauffmann's (Halle) experimentation in the treatment of obesity, with colloidal palladium ("colloidal palladium hydroxydul"). Our correspondent wishes to know whether the treatment has proven generally successful; and, also, where the article may be obtained. "I am" so often asked by obese persons how they can rid themselves of their superfluous adipose tissue," he writes, "but thus far my efforts to relieve them have been most unsuccessful."

We cannot express an opinion as to the efficiency of the socalled "Kauffmann treatment for obesity." A translation of Kauffmann article appears in *The Therapeutist* (Vol. XXIII, No 7.) If you desire a copy, send 12 cents to the publishers, Messrs. Henderson & Spaulding, Sylvan Grove, Old Kent Road, London, S. E.

Palladium is now being investigated, as is vanadium. It is possible, of course, to influence metabolism, materially by the administration of the salts of the various metals, one way or the other.

Kauffmann bases his treatment upon the idea that metals of the platinum group exert a marked hemolytic action, i.e., are good oxygen carriers. With this in mind, he attempted to find among the colloidal preparations of pladium, platinum, ruthenium, and osimium a product that would prove really serviceable in obesity—a condition arising from a disturbance of the normal oxidation process.

It is supposed that the platinum colloids excite the processes of combustion and, as a result, increase oxidation; destruction of body-substance naturally follows.

In view, however, of our present imperfect knowledge of the subject, we would hesitate to use this socalled "palladium hydroxydul."

We are mailing you literature on the treatment of obesity which will, we think be of interest, and assure you that the eminently rational and safe procedures outlined prove effective in the majority of cases.

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Query 5941.—"Duodenal Ulcer." A. T., Georgia, writes: "Could you outline for me a really good internal treatment of duodenal ulcer? If possible, I want to avoid resorting to operation in a case under my care."

The medicinal treatment of duodenal ulcer is practically that of gastric ulcer. In both the exact conditions existing must be ascertained, and therapeutic procedures based upon these.

When hemorrhage is troublesome, we have found it advisable to give calcium chloride or calcium lactate (or, better still, these two salts in combination), three times daily, for some time; or a solution of calcium lactate (8 to 12 grains in 4 ounces of water) may be thrown into the rectum. A 10-percent solution of gelatin, about 1 ounce, may be taken internally twice a day, or, also, 15 to 30 grains of strontium or magnesium lactate in 4 ounces of sterile water by hypodermoclysis. Also, 5 minims of a 1:1000 solution of suprarenalin or supranephrin have yielded good

results, but great care must be exercised to avoid too marked an increase of arterial tension.

In *acute* hemorrhage, apply the ice-pack to the epigastrium; also, give morphine sulphate, 1-8 grain, hypodermically. The hemorrhage checked, feed per rectum every twelve hours, and give white of egg by mouth twice daily. The oxide or nitrate of silver or bismuth subnitrate should be given in fairly full doses as conditions improve. An existent hyperchlorhydria must be corrected, of course. Iron and arsenic should be pushed if anemia exists.

The prognosis is serious in cases of frequently recurring hemorrhage. However, complete recovery may follow proper treatment. It is not always easy to differentiate between duodenal and gastric ulcer. It should be remembered that the former condition is more frequently observed in males. Pain is more frequent to the right of the median line, and not radiating to the back. Vomiting is rare; melena is quite frequent. Local and circumscribed tenderness on pressure is not marked as in gastric ulcer. Intestinal hemorrhages are frequent, and the possibility of sudden collapse from them at any time should be remembered.

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QUERY 5942.—"Scrotol Eczema." K. C., Indiana, for over four years has been treating a very marked case of eczema of the scrotum. Nothing so far has done any material good, and the Doctor, having "tried so many remedies without avail," has "begun to lose faith in medicine." And, he continues, "I now think of trying corrosive sublimate solution, 5 grains to the ounce of alcohol, applying it to all the affected areas, morning and night; in fact, I have done so. The eczema just about drives the man wild."

As we have pointed out before, eczema of this type is invariably intractable, especially if the underlying systemic disorder is not corrected.

The disease, when it attacks these parts, is usually of the erythematous variety. Itching is severe, and fissuring not uncommon. The urine must be carefully examined for sugar. In every case a suspensory bandage should be worn; the writer prefers to use a flat cheese-cloth bag, which is to be dusted freely with a powder consisting of zinc stearate, boric acid, the phenolsuphonates, and talc.

In very stubborn old cases, this preparation may be tried; Tincture of benzoin, 1 ounce; salicylic acid, 5 grains (or boric acid, 20 grains); oil of cade, 30 grains. Should this fail, a 2 to 5-percent solution of silver nitrate in spirit of nitrous ether may be applied once a week, and a mild salve (resin ointment and zinc oxide, equal parts) used in the interval.

Always the skin should be thoroughly washed every second or third day with hot boric-acid solution. Elimination must be maintained, thorough digestion secured, and hepatic activity stimulated. A most careful combination is echinacoid, gr. 1-2; alnuoid, gr. 1-3; irisoid, gr. 1-5; to be administered three or four times daily. The triple arsenates should be taken after meals.

QUERY 5943.—"Dislocation of the Semilunar Cartilage." W. B., Idaho, is treating a woman troubled with what appears to be a dislocation of the internal semi-lunar cartilage of the left knee. This has occurred off and on for probably thirty years, but, except for giving trouble for an instant or very brief spell, it has occasioned very little inconvenience until the last six months.

In February and again last month, the woman has been confined to bed, the knee swelling and causing considerable pain. During the period of swelling the cartilage can be detected, when dislocation occurs pain is severe. The patient wears an elastic stocking (almost too snug to be tolerated), but the cartilage seems to slip out just as readily as without it. The woman is fifty-two years of age and has just passed through the menopause. She is disposed to be "knockkneed."

In internal derangement of the knee-joint (slipping cartilage, dislocation of the semilunar cartilage), operative treatment unquestionably is the quickest, surest, and most satisfactory procedure.

You know, of course, that the original injury generally occurs from a severe wrench, a sudden misstep or strain while standing or walking. At the time, the tibia is radiated outward on the femur and the knee is slightly flexed. A sickening pain is felt in the knee, and it is impossible to extend it. Protusion of the internal cartilage may be felt in front. Reduction is effected by flexing the knee, radiating the tibia and pressing on the cartilage. Following the injury there is synovitis, accompanied by tenderness upon pressure.

In most of these cases the accident is repeated during any slight twist of the knee. In older cases, there is marked muscular atrophy and joint relaxation, so that lateral movement of the joint is present.

If the attacks are frequent, there is little outlook for spontaneous recovery. As a matter of fact, mechanical treatment by the use of kneecaps, bandages or pads promotes muscular atrophy and is a source of discomfort.

Under the circumstances, doctor, it would be wisest for you to have your wife examined by a competent surgeon. If your diagnosis is confirmed, the joint should be opened by a longitudinal incision, the loose parts of the cartilage removed, and the joint closed by sutures. Fixation for two or three weeks should follow. At the end of this time, massage and passive manipulation should be begun.

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QUERY 5944.—"Molluscum Fibrosum." W. M. F., Alabama, has under treatment what he calls a very peculiar case in which he desires assistance. He writes:

"Patient, a man 76 years old, active, and goes where he pleases. He has a goiter (started about six years ago) which interferes with his talking to some extent. However, the trouble that causes the most anxiety is 'bump formations' all over his body. When these first make their appearance they are small—about the size of shot—and continue to grow until they get to be as large as the end of the thumb. There is no inflammation or any troublesome symptom, except for a slight itching and 'drawing sensation' over the region of the stomach. The swellings are from one to three inches apart and very much resemble wens; they are movable and seem to be loose under the skin to some extent and of about the same consistency. They first made their appearance about three weeks ago, and they are increasing in number. He has just returned from Birmingham, Alabama, where he went to consult physicians, but received no encouragement; in fact, none of them seemed to know what the trouble was. These bumps have been coming about three weeks, and now are all over the body. The doctors at Birmingham examined his blood and kidneys and found no abnormalities."

We are inclined to think that your patient suffers from molluscum fibrosum, a connective-tissue new-growth, an affection that appears as one or more sessile or pedunculated, pea- to egg-sized, firm, soft, rounded (sometimes flattened), painless tumors seated beneath the skin.

The skin over these tumors generally is normal, but may be tense or lax and of a slightly reddish color. The more rapidly the growths enlarge, the more likely is the skin to assume an erythematous tint. The etiology is obscure. The subjects of the malady are physically rundown.

Mulluscum contagiosum must be differentiated from the foregoing. The growths in this variety are smaller and more commonly seated about the face, and may have a central depression, or aperture. The skin, moreover, is thin and stretched and presents a semitranslucent appearance.

Diffuse lipoma appears as soft, flattened, variously elevated, somewhat lobular tumors, with no sharp delimitation. They are not painful. They are usually found on the neck, back, and buttocks.

Neuromata are firm, immovable, elastic, fibrous tubercles, containing new nerve-elements, and development is accompanied by violent paroxysmal pain. This condition is but rarely observed.

In this connection, we must not forget that multiple benign tumor-like new-growths, lentil- to bean-sized, whitish or bluish-white, rounded or slightly flattened, are occasionally observed. They seem hollow and when pressed with the finger can usually be pushed below the level of the surface; upon withdrawing the finger, the tumor springs back. The growths appear slowly, as a rule; new tumors arise from time to time. Stelwagon reports the case of a middle-aged woman who had forty such tumors, but which gave rise to no subjective symptoms. The cause of this condition is unknown. The skin alone is involved in their formation.

We suggest that you excise one of the smaller growths, under local anesthesia, and forward it to a competent pathologist for examination. A definite diagnosis can then be made.

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QUERY 5945.—"Aphasia." G. W. P., Kansas, is treating a man who has been suffering from a peculiar nervous disease for about three months. "At first he partly lost the use of his voice, and since then he has been almost unable to talk or write. He is 73 years old, was a soldier in the Civil War, and has been in comparatively good health most of the time since about 1886, at least. He complains much of the time now of a pain in the left upper arm. He rarely has headache, but most of the time has 'a strange feeling in his head.' He has lived an active life. He has consulted several physicians, for his present trouble, but received little relief. About seven months ago he became troubled with constipation and at intervals

has had to take some physic. The constipation increased until about three months ago, when the present nervous affliction appeared. His pulse has been normal most of the time."

It is clear that this man's condition is altogether too serious to permit of an offhand diagnosis or haphazard prescribing. We do not quite understand as to whether this man's aphasia is complete or occurs only periodically. In motor aphasia (aphemia of Broca), the power of articulate speech is wanting: the patients have forgotten the process, the mechanism, which they formerly called into action to produce the desired speech. They are, therefore, mute, although retaining the power to utter a few inarticulate sounds. Such loss of speech cannot be ascribed to any paralysis of the muscles, although often we find as an accompanying phenomenon a hemiparesthesia or even a hemiplegia. Frequently, if the lower facial or right hypoglossal muscles are involved, the tongue, when protruded, deviates to the right.

Considering the patient's age, it is probable that his condition is based upon cerebral changes (sclerosis). Broadly speaking, maintenance of elimination, equalization of circulation, and improvement of nutrition are the essentials of treatment. It would be well to have the man examined by a competent neurologist. Failing this, make a very thorough physical examination and report your findings. The reflexes should be tested, and also the pulse rate and blood pressure determined.

With such clinical data and the report of a competent pathologist on a specimen of urine (4 ounces from the 24-hour output, stating the total quantity voided), we may be able to formulate a more intelligent answer.

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Query 5946.—"Hemorrhoids." J. E. H., Texas, asks for the detailed technic of the injection-method of treating hemorrhoids. He has a patient with "bleeding piles," the tumor coming down at each defecation. The protruding mass is of dark-red color, and is flat and soft. There does not seem to be an apex to the tumor, and he wonders at what point he should make the injection. The protrusion has been touched with nitric acid, and the patient applies cotton wet with a mixture of 1 dram of dilute nitric acid and 8 ounces of water, to stop the bleeding, as advised by Lanphear.

It is probable that you have to deal with the arterial variety of hemorrhoids, and such tumors should not be injected by anyone not fully familiar with the procedure. In all cases, great care must be taken not to throw any of the solution into the bowel-wall, as extensive sloughing invariably follows.

Any tumor formed in the mucous and submucous areolar tissue covering the internal sphincter-muscle is really a hemorrhoid. In some cases, the dome (and apex) of the pile is so denuded that a raw, bleeding surface exists. This, when turgid from straining or rasped by passing movements, bleeds freely. Blood may ooze from the whole granular base or be seen pumping from one or more open vessels.

If under the bleeding surface no tumid mass of considerable size exists, we have to deal with a capillary hemorrhoid. Should infection occur or a thrombus form, the angiomatous substance takes on a solidification. Sometimes it is difficult to reduce such tumors. Allingham points out that when the hemorrhoid is reduced within the sphincter it so far empties its veins that oftentimes there remains nothing which the palpating finger can feel. When prolapsed, the hemorrhoid, of course, is turgid. As it is also within the sphincter, much inflammation is set up.

A socalled "attack of piles" really means that the hemorrhoidal mass, extruded at stool, is held outside the sphincter and becomes more turgid, inflamed, and painful. Under such circumstances, the sphincter takes on a spasmodic action, and sometimes neither the patient nor the physician can reduce the protrusion. Under such circumstances, sedative treatment should be employed and the patient put to bed for two to ten days. Operation during this stage of inflammation is not desirable. The mass must be reduced under anesthesia. When it is reduced, the sphincter should be dilated forcibly.

Exceptionally a pile denuded of epithelium will bleed at each movement, the patient losing several ounces of blood and the hemorrhage ceasing only when the tumor is drawn within the sphincter.

Your patient's trouble seems to be of this nature, and we doubt the advisability of making the injection. Ligation and excision would prove more satisfactory. For the operative procedure, see any modern work on surgery.

However, if the nitric-acid treatment is faithfully (and intelligently) followed, and the patient given a mild laxative at night, and a laxative saline on rising the next morning,

hamameloid and collinsonoid, two granules, and strychnine, gr. 1-64, three times daily, with a cool enema (aqueous extract of calendula, 1 ounce, triple sulphocarbolates, 20 grains, water, 12 ounces), after each stool, marked improvement should be secured in a week or two.

As already pointed out, the sphincter should be thoroughly dilated as a first procedure.

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QUERY 5947.—"Emetine and Emetoid. Dermatitis Venenata." F. H. C., Ohio, dedires to know just what is the difference between emetoid and emetine. Also, whether there is any effective treatment for ivy poisoning. "I have on hand," he writes, "a case of ivy poisoning followed by a skin eruption that is very annoying—it looks something like acne rosacea, but there is also intense itching and burning. The patient has been taking Fowler's solution of arsenic for years for the purpose of preventing attacks of ivy poisoning and, as a result, has contracted a mild neuritis. I should like to know whether there is any way to prevent this man from becoming poisoned."

Emetoid is a 10-percent trituration of the hydrochlorides of the alkaloids of ipecacuanha, i. e., emetine and cephaeline. This drug increases the secretion of the mucous membranes and is of service in bronchitis, congested conditions of the upper respiratory tract, many enteric disorders, and where it is desirable to increase the output of bile. As an expectorant, the dose is one to four granules of 1-64 grain each every one-half to two hours, to effect. In enteric disorders, give 1-32 grain or more every hour or so, as required. To unload the liver, give 1-2 to 1 grain, with little or no fluid, when going to bed.

Emetine is the specifically expectorant principle, 1-64 grain of the hydrochloride being equivalent to four or five times the quantity of the combined principles as presented in emetoid. Emetine is distinctly indicated wherever it is desirable to modify or increase the mucous secretions of the respiratory or digestive tracts. Also useful in chronic gastritis of alcoholics (together with capsicum—the oleoresin), in mucous diarrheas of children, dysentery of adults, and so on. It is a particularly valuable remedy in bronchitis, especially of children, where the cough is dry and "ringing," and almost incessant.

Of late, emetine hydrochloride has been proven to be an almost positive cure for chronic (amebic) dysentery. If you have access to CLINICAL MEDICINE, read the articles upon this subject which appeared in the August issue.

In the other matter, there is a question whether you are dealing with dermatitis venenata or with arsenical poisoning. You say the man has been taking Fowler's solution for years to prevent attacks. Are we to understand that the dermatitis appears each year without definite exposure? Some individuals can hardly go near the plant without the eruption appearing almost immediately, though generally it develops a day or so after exposure.

The dermatitis from rhus usually subsides in the course of a week, but may last for weeks or even months. Not infrequently, however, some constitutional disturbance (acidosis), which causes the individual to be peculiarly susceptible, is responsible for the prolongation of the eruption.

In every instance the patient should receive a mercurial purge, followed by a laxative saline and then echinacoid and irisoid in full dosage, every three hours. About 1 or 2 drams of fluid extract of grindelia robusta added to 4 ounces of water, when continuously applied with a compress, usually proves curative.

The writer has had excellent results from the following procedure: Dissolve one menthol compound tablet and 20 grains of the sulphocarbolates of sodium, potassium, and zinc in 8 ounces of water. Apply compresses saturated with the solution for two or three hours, then dry; empty any bleb, and anoint with zinc-stearate ointment.

Arsenical eruptions, of course, require entirely different treatment.

If you have access to Stelwagon's or Crocker's "Diseases of the Skin," read the chapter on this subject.

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QUERY 5948.—M. E. Bull, of Illinois, asks "Can chromium sulphate be given safely to a pregnant woman?"

We regret to say that our knowledge of the action of chromium sulphate is insufficient to allow us to express a positive opinion as to its exerting an inimical effect upon a pregnant woman and a fetus *in utero*. Frankly, we should hesitate to prescribe this or any other potent drug during pregnancy, unless, of course, comparative reasons for such medication existed.

There is no reason to believe, however, that the drug *per se* will influence the fetus. Definite knowledge upon this point can only be obtained by experimentation.

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Long Life For the Incurable?

DISEASES used to be divided into functional and organic. Those in the functional category were of no consequence; the organic were beyond reach.

The study of functional disease was discredited, because laboratory research failed to demonstrate any anatomic basis—ergo, there was always room for the assertion that no real disease existed. The patient was the victim of an imaginary ailment, the doctor administered suppositious remedies; ignorance and credulity registered a factitious cure.

In organic disease, the pessimist secured an easy victory—"Can you demonstrate the possibility of restoring a solitary lost cell? If so, you can as well restore a lost leg."

Here, as usual, the true point for therapeutic attack is overlooked. Our object never is the restoration of parts or organs to the *status quo ante bellum*, but, rather, such management of the patient as will secure to him the greatest possible remnant of life—a life that shall be happy and useful.

Apply this rule, and the prognosis of organic maladies becomes more hopeful. Take the case of organic heart lesions. I am fond of quoting the case of a Connecticut doctor, who requested me to listen to his heart. I did so; then looked up and nodded understandingly.

"How long have you had it?"

"Thirty-three years; first recognized it when a medical student."

"What have you been doing?"

"Work of a country doctor."

"How have you managed it?"

"Found just what I could do and limited myself to that."

I asked a young lady how she could play tennis so well, with her mitral lesion, which she understood as well as I do. "If you will notice my play," she made answer, "you will observe that I never try for a stroke I do not get. People strain themselves trying for what is beyond their reach."

A lady recently presented herself with a valvular lesion and a collection of prognoses varying from gloomy to gloomier and through to gloomiest. Yet, she has neither dropsy, cyanosis, nor permanent dyspnea; just a little pain, palpitation and oppression whenever her stomach bloats. There is a history of repeated attacks of rheumatism, of pneumonia last winter, of slight hemorrhage from the bronchi once. Examination shows a small area of dullness in the central right lobe of the lung, and a slight click is heard most plainly over the apex during the post-diastole or interval. There is no evidence of regurgitation or stenosis. A broken tendinous chord flapping?

This is the treatment: Very careful regulation of life; avoid elevations above 1200 feet; drift southwardly as the weather cools to the point of affecting lung comfort; exercise ever short of fatigue; weight to be restrained to near the normal of her 130 pounds, by expanding or contracting the daily ration of water; diet with care, eating physiologically, avoiding all that induces flatulence; bowels kept exactly normal.

In addition to the foregoing: A morning spoonful of a saline laxative and a granule of

podophyllotoxin at bedtime whenever the stools are dark and offensive; one to three milligrams of arsenic iodide at bedtime, to favor the absorption of the postpneumonic infiltration and the debris blocking the perivascular pulmonary lymph-spaces; a little malt extract with meals, to insure complete starch digestion.

Accessory: Friction of the skin over neck, shoulders, and chest with volatile liniment, the latter alternated weekly with towels impregnated with rock-salt—rubbing vigorously to redden the skin. The underclothing and stockings to be of pure wool.

What is the expectation? That she will live free from pain and discomfort, contributing to the welfare and happiness of family and friends, able to preside over her household (but not do housework), attend amusements, go to church, market, to do shopping, enjoy life, be useful, and live out to the full limit fixed by the tables of the actuary. Ill-directed, unmindful, or with intercurrent disease, she will die within a few years.

Talk of "curing" such disease is preposterous. Neglecting to treat such a sufferer is a crime.

Mister Man, your vital capital is represented by one thousand dollars.

You may manage it so that it will support your life pleasantly and usefully until you reach your three-score and ten.

Or you may consume your vital stock in one wild orgy and die in a month; or waste it in ineffective attempts to make it a million, and be a physiologic pauper in a year.

The dyspepsia on the farm, the autointoxication with its concomitant rheumatism, bad complexion, headaches, biliousness, 'socalled malaria, vertigo, and eczema are frequently traceable to a table groaning with good things to eat.—Dr. John N. Hurty.

THE YESBUT

A newspaper published in Philadelphia, where they sure ought to know all about it, wittily describes the Yesbut.

The Yesbut is the man who greets every new plan, idea and proposition with a sickly smile and the frigid handshake of doubt, fear, and hesitation. He is afraid of anything so radical as thinking for himself, much less trying any new thing. He must wait until the authorities have approved, until the new tenet has become orthodox. The real Yesbut wont use hyoscine-morphine anesthesia until the Mayos have adopted it. He would not think of trying calx iodata in croup until the Council has O-K'd it. He never employs active principles, because he might be suspected of being tinged with Abbottism. He is too cowardly to exert himself to save the lives of men and women and little children who are dying around him for want of such modern remedies, from fear of what somebody else might say.

Opposed to this Yesbut, our Quaker contemporary places the Tryitout. Tryitout's aids are Energy and Enthusiasm. His searchlight is Hope. His brake is Common Sense. His motor is the earnest determination to do something, to do good, to save lives, to stop suffering. He is a man of deep religious sentiment, and he firmly believes in the existence of a good God, a being who never permitted an ill to afflict humanity for which he did not also provide a remedy, and one within the reach of such wit as He endowed man with.

The Tryitout's robust, active faith is a comfort and an inspiration to those who feel their own faith weakening.

He listens to a new scheme, and while pointing out its apparent faults is ever ready to scan it for possible good; and to encourage its originator to further trials by trying it himself. He never likes to lose any possibility of bettering his means of doing better work. The worst he can say of a new idea is, "There may be something in that."

Our eastern authority evidently has the history of Philadelphia at his pen's end—he has two local examples of the Tryitout to cite. One is John Wanamaker—where did they get him? "He has never yesbutted an idea, no matter how new and startling it may have seemed."

For the other progressive Quaker, they have to go back to that immigrant from New England, Benjamin Franklin. He was "the blue-ribbon Tryitout." "Those who laughed at his key and kite are now a part of the dust that fringes the right of way of some electric railway."

"The Tryitout is the true progressive. He has grit, go-ahead, and gumption. He knows, as you and I know, that, if no one ever dared to break the rule of doing as father bid, we still should be living in caves and trading stone hatchets for juicy roots. He knows that all the advances that we have made since the gate of the Garden of Eden banged behind our kin have come through trying-out."

Which are you, doctor, a Yesbut or a Tryitout?

A little of both? Then, why not culti-

vate the Tryitout tendency and let it develop into your predominating trait?

Did you ever get any good thing by not trying?

Are not your most valued remedies and methods derived from the experiments you did muster up courage to try?

If others feel so sure that they are getting good results from the sulphocarbolates, copper arsenite, cactus, gelseminine, solanine, and all this host of novelties, why should you linger along in the rear with your antiquated tinctures and extracts?

Why don't you get an "auto" and give old Dobbin a vacation?

Think the science and art of therapeutics stopped with Bartholow a quarter century ago? Think these serums and bacterins and vaccines and antitoxins are illusions and fakes? If the others are getting such good results from them, maybe you had better get illusioned a little yourself.

Go off and sing! The trouble drifts
Whenever spiritual singing lifts
Its music of the heart of things
On melody of trusting wings.
Go off and sing! The cloud will fly,
The golden morning mount the sky,
And in thy heart again its beams
Kiss bright the fading glow of dreams.

—Baltimore Sun.

INSTRUCTION IN SEX HYGIENE

At a meeting of the Chicago Medical Society, held on October first, there was a notable discussion of the problem of instructing our children and young people in knowledge of the sex functions. The speakers were Prof. Charles R. Henderson, of the University of Chicago, Dr. William T. Belfield, Dr. Rachelle Yarros, Mrs. Ella Flagg Young, superintendent of the Chicago public schools, and the Rev. Dr. Melody, of the Catholic University at Washington.

Naturally, various views were presented, and the matter was approached from all angles—biologic, sociologic, pedagogic and theologic. In spite of this, there was a surprising unanimity of opinion as to essential principles, the one really dissenting voice being that of Dr. Melody, whose attitude was that of the Catholic Church, which opposes sex-instruction in the school and would relegate the whole matter to the home and the church—looking upon it purely as a question of morals.

Most of the speakers were agreed that there was necessity for such instruction. The parents cannot always be depended upon to give the right kind of teaching, and it remains for the school to do so, unless the work is to remain undone and the children are to be brought up in ignorance of the full significance of sex and its responsibilities.

In illustration of parental stupidity, one speaker told of several little girls who had been enticed into a lumber yard, where liberties had been taken with them. Their teacher and the principal of the school which they were attending were appalled. The children did not seem to understand fully that they had done something very bad, so their mothers were summoned. Imagine the surprise of these teachers, when one of the mothers, after hearing the story, promptly slapped her little girl—not because of the wrongdoing but because "she hadn't minded her teacher!" This mother's mental attitude was that of the other women.

Admitted the necessity for sex-instruction in the schools, there is a vast difference of opinion as to how, when, to whom, and by whom it is to be given. That there is danger of attracting too much attention to the sex function and by so doing stimulating sex-curiosity and the very desires which should be kept under control, most of the speakers admitted. That it is not easy and perhaps unwise to take it up in the primary grades, was also admitted. The ideal, as Dr. Henderson pointed out, is a method of education so constructed that *special* instruction in sex matters will become unnecessary—a method which will make the acquisition of such knowledge a natural part in the development of the child.

Mere instruction in the function of sex, even when presenting the facts regarding the physical and moral suffering which may result, is not a sufficient deterrent from sexual immorality. Men who know all about the ravages of gonorrhea and syphilis, and young women who know all about the dangers of becoming pregnant, do not hesitate to enter illicit relationships. The man may have learned that it is possible to protect himself against disease by simple local medication, and the woman may have learned to "take care of herself;" but whether they have or not, when the impulse to sexual intercourse seizes them—essentially a biologic impulse, inherent in every living thing—too often they yield. The only safeguard is strength of will developed by years of true *education*, built upon a sound character, and ennobled by an ideal conception of the beauty, the chivalry, and the responsibility of their sex.

We cannot expect the school to build such characters alone. The greatest source of power is the home; but the school can and should provide the essential instruction and supplement it with inspiration to clean living. It is because of her insistence upon the importance of the character element in this training that Mrs. Young insists that the physicians selected to give sex instruction in the Chicago schools shall have more than the technical knowledge necessary; more than the ability to present facts intelligently and with force. They must know how to idealize the subject, lift it out of the plane of the sordid and away from the possibility of vulgarity or smut, and show that it is associated with the nobility and beauty as well as with the crass realities of life.

Tell the young folks the truth. It will not hurt them if told in the right way. The danger lies in the foul suggestiveness to which they are exposed everywhere and against which the best bulwarks are knowledge and character. Both of these should be developed —in the school and out of it.

How much more information have you got today than you had yesterday? Understand, it's a question of mathematics. If you are going to go on taking more money out of the world you've got to go on developing the mental muscles with which you take it.—Thomas E. Dockrell, in "The Caxton."

SEX PROBLEMS: SOURCES OF INFORMATION

Requests for information concerning the problem of sex instruction are growing increasingly common. For instance, within the last two days we have received letters from two physicians about proposed lectures on sex-hygiene. One of these men is to address classes of children at a church and also to give several talks to the young men of a National Guard regiment in a large city. The other is looking for someone to talk about sex matters before the Y. M. C. A. of his town. Both these men request us to prepare lists of books which they can read in preparation for these courses, as well as the names of works of a popular character that may be recommended to others. This we will attempt to do to the best of our ability.

First, what shall we give the children? We know of nothing better than Dr. George F. Butler's "Every Boy's Book" and "Every Girl's Book." These are intended for children old enough to read, say from eight to fifteen years of age. Also, they are admirably adapted for use by the fathers and mothers, since they present a simple method of instructing children along natural biologic lines.

An excellent book for parents to read is Dr. William Lee Howard's "Start Your Child Right." In this volume Dr. Howard has endeavored to "translate medical terms into plain everyday words," thus giving the reader what he wants to know and should. Dr. E. B. Lowry has published a series of five books upon sex topics, chastely written, yet not lacking in detailed facts. Of these, "Truths" is intended to provide the information necessary for boys; "Confidences" is designed for the young girls; while "Himself" and "Herself" are for older readers of either sex. Of small booklets for lay reading, the "educational pamphlets" of the American Society of Sanitary and Moral Prophylaxis can be recommended. The volumes of "Transactions" of the same organization should be familiar to every physician.

Of larger books upon sex for the layman, Lydston's "Sex Hygiene for the Male" stands well near the top in scientific importance as well as in literary interest. This is a good compend to place in the hands of young college men. "The Boy's Venereal Peril" answers the need where a very small pamphlet covering one phase of the subject briefly is wanted; it is published by the American Medical Association. A good small volume for the adult lay reader is Dr. Henry B. Hollen's "The Taint."

The physician should know more about the sex question. With the anatomy, physiology and pathology of the sexual system he is, of course, familiar; few, however, give special thought to the deeper biologic and psychologic problems involved. Any doctor is likely to be called upon for information, and many, in the very near future, will be asked to give talks or lectures upon these subjects. Be prepared.

To begin with, read up on heredity. The discoveries of Mendel, De Vries, and other modern researchers have completely revolutionized our conception of the nature of the inheritance of physical and mental traits. Bateson's "Methods and Scope of Genetics" gives a good introduction and is inexpensive. Davenport's "Heredity in Relation to Eugenics" is an exceptionally fine work on the subject and presents facts with which every physician should be familiar. The author is director of the Carnegie Institute's research-work in heredity.

Every physician studying sex problems should be familiar with the writings of Dr.

William J. Robinson. They are advanced—radical. The average physician will disagree with much that Dr. Robinson has to say; yet, all the more reason why he should read his books. "Never-Told Tales" and "Sex Problems of Today" should be in every physician's library, and every student of sex must read *The Critic and Guide*, in order to clear his ideas upon these debateable problems.

For information concerning the mental phases of this topic, Havelock Ellis series of six volumes on the "Psychology of Sex" stands in a class by itself; while the student of the social evil can get accurate information concerning prostitution and the venereal-disease problem by reading "The Social Evil in Chicago" (the report of the Chicago Vice Commission) and "Commercialized Prostitution in New York" (the report of the Rockefeller Bureau of Social Hygiene).

We have given a rather long list, and, yet, we know we have omitted many excellent works. However, those that have been cited probably afford a sufficient outline for the needs of the doctor as well as of the layman he may be called upon to advise.*

RECEPTION-ROOM AND OFFICE

We should do well to bear in mind that the visit of the patient to the office, which to the physician is a mere incident in the day's work, is to the patient an absorbing, nerve-racking event, upon which his mind is more or less morbidly concentrated, and in consequence he is in an exceedingly sensitive and impressionable frame of mind. The furnishment of the waiting-room, therefore, ought to be so ordered as not to intensify this morbidness, but rather as much as possible to counteract it and to restore the patient's normal poise.

Photographs of operating-theaters or hospital wards, pictures and prints such as Rembrandt's "Lessons in Anatomy," grinning skulls and ghastly skeletons, and like examples of professional art are scarcely inspiring objects for the contemplation of a sensitive person waiting for even the most trifling operation or awaiting a verdict of life or of death. Even such a work of art as Luke Field's "The Doctor" is, in my opinion, out of place. It is a beautiful painting, with a touching significance, but the doctor's reception-room is not the place for a patient to be touched.

Of course, one should not rush to the other extreme and make the ostentatious gaiety of the room a mockery of the patient's misfortune. A simple cheerfulness is the keynote. A light, cheery room, with no suspicion of "shop" about it; a few dainty touches such as a woman's hand can give it (encourage the attendant to exercise her feminine tact in this direction); some interesting pictures of wholesome, vivacious scenes from nature and the lighter side of life; and, above all, if practicable, a nosegay of bright, simple flowers upon the table; these things will go a long way toward calming and cheering the waiting patient's perturbed and anxious spirit.

When one comes to the consulting-office itself, while the same tactful consideration of the patient's sensibilities should prevail and all that is likely to grate upon his overwrought nerves kept in the background, it is not well to carry the ingenuous idea too far. The patient is here for a serious purpose, and it is both a slight upon his claims and a reflection upon the doctor's good sense to make any show of dalliance at this point.

To be sure, the patient does not wish to be "impressed" with a glittering display of formidable surgical instruments or an imposing array of bottles, or with any such mistaken ostentation as that; he does expect, though, a certain quiet, business-like attention and preparation—a clearing of decks for action, so to speak—bespeaking adequate equipment and confident readiness for the work in hand.

Any attempt at decoration or artistic effect in the consulting-office itself is in bad taste. As before intimated, the patient is here for business, and he is entitled to serious, business-like treatment in every way. The more severely and plainly the office is equipped, the better; let all apparatus and material be kept out of sight as much as possible, but everybody and everything wearing the air of alert attention and adaptation to the patient's immediate needs.

These may seem like trivial matters; but it is the little things that count in dealing with people, especially with people who are in the peculiarly sensitive and impressionable state of mind of the ordinary patient. The psychology of the office and the reception-room is no mean factor in conducting a successful practice.

¶ We greatly desire to secure the opinions of our readers as regards the arrangement and equipment of the doctor's office. We hope

* We shall be glad to supply any books mentioned in this editorial. Prices will be furnished on application. "The Social Evil in Chicago" is not for sale, but may be seen in any large public medical library.

that those who have given the matter special thought, and who have worked out "schemes" that seem to them satisfactory and whose offices are planned to promote efficiency and comfort will write us, sending plans (merely sketched out) and, if possible, photographs.

The substantial professional service that a well-planned and attractive office can render is a matter of more than minor importance. Let us hear from all those interested.

A man's "single aim" in life: You see him, do you not? His face is set; you can almost hear his teeth grip themselves together. He is a splendid young Saxon. He has but one arrow for his long-bow of ash. If he misses the cornered boar, that faces him with head swinging from side to side and foam dripping from its red mouth, the man of the "single aim" will be slit to ribbons. His whole world is a bow, one arrow, the boar, and that "single aim"; then life or a horrible death. That is the sort of single aim in endeavor, that, if one can get it, will work miracles.—Ladd Plumley.

HOUSEWORK: SUFFRAGE

To Americans, the difficulty into which our English cousins have tumbled seems incomprehensible. The solution is so easy, the proper course of action so evident. If woman wants the ballot, why in the name of justice and right and manly courtesy don't you give it to her! Wake up, John! Don't you hear what the lady says? She wants to vote. Hustle up; stand aside and let her pass! Where are your manners!

That she *wants* to vote is all sufficient reason for permitting her to do so. Voting will not unsex her or make a man of her. Nothing will do that. Nature has interposed her fiat. The watch may grieve that it cannot be a threshing machine, but the fact remains that a watch it is and must remain.

Man and woman are, and will, remain radically different. The man earns the living. Woman makes life worth living. Without the other, each is as worthless as one blade of the scissors. While man works woman supplies the object, the incentive to work. That either should assume superiorty for his other part in the compact is preposterous.

The woman's part has ever been to adorn the house, make it the haven to which the man's steps turn. "Whom will I have to go home to when my day's work is done?" was the agonized cry of a husband when told of his wife's death. To bear and rear children; to prepare the food, the clothing, nurse the wounded; this has ever been the woman's part.

Analyze it, and it is evident that she and her work comprise all for which men hope and work. Without home, wife or child, man is but beast. Every effort, every advance, every aspiration of man from the troglodyte till now has been prompted by the desire of enhancing the home life. Civilization, religion, law, altruism are so many evidences of what woman has inspired in man.

Yet—where is the woman who appreciates her exalted place? We have known possibly ten thousand women, of ten thousand varieties, comprising every variety except the one that loves housework. Why? Because they do not respect it. No woman mentions housework without complaint or sneer. Just as soon as the family rises high enough, her first thought is, to roll this burden off on some other woman. The one who assumes the burden loses caste thereby, incurs the contempt of her sex, receives the degrading appellation of "slavey," "domestic," servant," and is derisively classed as K. M., scullion, pot-walloper. Ingenuity is exhausted in devising terms expressive of her reproach.

The streetwalker may be avoided in public, but in private she is the object of deep interest. Her methods of attracting male notice are studied and copied. She, this outcast, is the arbiter of fashion; her successes are the envy and exemplar of her sex. She shows her charms in public, on the stage; her clothes are the patterns, her jewels the despair of her sisters: and when at last she carries off triumphantly the matrimonial prize of the season, her debatable past is forgotten and her success becomes the study of many a would-be imitator. The price she paid many another feels willing to pay for similar success. The market is through with sellers, intent on making the best bargain for their wares.

Be she never so virtuous, so helpful, so skilful, the kitchen-maid is despised. This is the problem confronting the housewife—the increasing difficulty in inducing women to assume menial duties, positions that degrade them. Wages rise, the quality of service sinks, till untrained, inexperienced "help" gets a wage our grandmothers would have been horrified to pay for consummate skill in this department.

The whole arrangement of the modern household has been turned over to meet the difficulty. For lack of serving-maids, we have exchanged the house, that was our castle, for the flat. Nine-tenths of woman's work is done outside the home—there's nobody to do it there. Does any spinster now spin?

Does any daughter (milker) now milk? Or brew, bake, weave, wash, iron, gather simples, make clothes, knit, or do any of the housewife's work as in the days of good Queen Bess? Or does she educate her children?

And, yet, "if there be a heaven upon earth," is it not when a man after a full day's labor returns to his loved one, who has spent her day's labor upon that home? The welcoming face at the door, the clean, orderly house, the kettle singing on the fire, the table with snowy cover, spread with the dainty grace, the food our love prepared as lovingly thoughtfulness dictates, the sprightly wit that drives away care and makes one forget fatigue, the sweetest, closest, companionship man's spirit can enjoy—ah-h!

Housework, housework! Where is the new Leader, the Messiah, who can open the eyes of woman and let her realize that by this she may make of this earth such a paradise that one need not wait for the one after death? Who will replace the Bacchante, the diademed Empress, yes, the Cecilia with eyes heaven-bent, with the truer and better ideals, the Lady with Broom, the Mother mending clothes, the First Wholesome, Handsome Loaf?

What legislation will enact statutes providing a four years' course in Domestic Science, the diploma of which alone will entitle the girl to a marriage-license? When will county fairs offer rich prizes for the best gardens, the best darned socks, the best ironed shirts, and mended coats; and for essays, with examples, on preparing potroasts, pies, vegetables, cereals, on economic but sufficient dietary lists; on the selection and care of provisions; on balanced human rations, made palatable and appetizing: on wildlings usuable, and on the innumerable opportunities open to the housewife?

The presence of a thought is like the presence of the woman we love. We fancy we shall never forget the thought nor become indifferent to the dear one. But out of sight out of mind! The finest thought runs the risk of being irrevocably forgotten if we do not write it down.—Arthur Schopenhauer.

AFTER MALARIA—WHAT?

When the first opposition to vaccination had exhausted its virulence, and that "preposterous vagary of an erratic brain" had to be admitted as an established fact, the profession and the educated public promptly went to the other extreme, that of enthusiasm. The wildest estimates were made as to the result upon the general longevity. It was calculated, since variola had destroyed a large proportion of the human race, that, by the cessation of this one pest alone the average of life would be materially increased.

As time elapsed, it became evident that these optimistic predictions were not realized—and the reason proved to be the intervention of an element that only a close student of human affairs could have foreseen.

Other infections, such as scarlet-fever and measles, had previously taken a certain proportion of the children away, and, since there were many more of the little ones than when smallpox killed off such a host, there were many more left to furnish food for the other pests. Those saved by vaccination did not all live to grow to maturity, but many died of some one of the other infants' fevers. There was, indeed, an increase in the average longevity, but it was not nearly as decided as had been expected.

When the fertile plains of southern Illinois were first settled by the whites, malaria grew so prevalent as to become proverbial. The name of "Egypt" instantly brought after it the thought of ague. The denizen of the prairies was popularly represented as carrying an "ague-stick," which he used instead of tobacco; as eating quinine on his bread, in place of sugar; and as making dates with reference to his alternating periods for "shakes." One noted writer went so far as to condemn the whole population of our southern regions as degenerates, in mind, morals, and physique, because they inhabited the "malarial belt."

As the soil came under cultivation, the malaria gradually subsided. The swamps were drained, the mosquitoes remain, but they are not so universally infected. Why? Whence got they the malaria plasmodia in the first place? Was it in the soil when first turned over by the plow? Did the germs flourish upon some weed or animal since exterminated?

An observation made many years ago may serve to indicate one possibility, and to show that despite acceptance of the mosquito transmission the last word has not yet been said on malaria:

When a deep excavation for a water-pipe was made in Port Richmond, in the northern part of Philadelphia, about thirty years ago, several victims of malaria applied to the present writer for treatment, along the first square that was opened up. When the next block was opened, more cases of malaria arose along it; and for two miles the opening of each block was followed by malaria in that

block. In lieu of a better explanation, the causes of the malady, it was surmised, were lying dormant in the soil until brought to light and activity by the disturbance of the deeper layers.

Since malaria in the former acceptation of the term is a thing of the past in our southern counties of Illinois, has anything arisen to replace it? It would be interesting to receive replies to this query from the older practicians of that region, those who practiced there during the former prevalence of the disease and are yet in the harness.

It is not likely that there has been any development of other maladies, as in the case of the extirpation of smallpox. Malaria did not kill; it attacked adults rather than children; and its cessation has left the people more vigorous and better qualified to withstand the attacks of other maladies than when they had been debilitated by the chills. But it would seem probable that the effect should be manifested in another way.

Malaria was not suddenly cut short, as was smallpox, but rather subsided slowly and imperceptibly. It might be expected that instead of the old-fashioned chills we should see manifestations of milder forms of the infection, possibly as anemias or neuroses. Has there been any such development in "Egypt"? Has "ague-cake" entirely disappeared? Has there been a decided reaction, and a marked improvement in the physique, and the mental powers of the "Egyptian" over what he presented when Billings perpetrated his celebrated libel?

The writer's personal observations do not go far enough south in these states, having been few below the middle of Illinois. In this section, however, he has been struck by the prevalence of a marked type among the women—the number of healthy, hearty, wholesome girls—clear-eyed, rosy-cheeked, with well-developed and symmetric figures, strong and capable, and with amiable, happy dispositions. They often are large and plump, but undue corpulence seems rare even in the middle aged.

I never visit this region but I wonder why the men, who bewail the degeneracy of modern women and their unfitness for wifehood and motherhood, do not go there. The man who wishes to marry a helpmate, and not a doctor's bill, might take notice.

Ideals change with the years. The time has gone when men looked for the fragile wisp of a girl, too ethereal for a diet of aught but caramels, too sensitive to endure the thought of a caterpillar, too useless for any place but a harem or a sanatorium—a millstone about the neck of her unfortunate male meal-ticket.

The woman of today is strong, capable, self-reliant, claiming to stand by her brother man as an equal, daring him to show her tasks for which she can not find a capacity that must at least exact his respect. She is a human being, with well-developed muscles, and with reasoning powers that challenge his best efforts to keep abreast of her. She is no weakling, but ready to fight for herself; alone, if need be, by his side in preference; since her qualifications to a great extent complement his own, and the equal partnership affords greater success than either can win alone. But the equality she demands—and deserves.

The Mid-west is the corn-land, where the greatest of cereals grow to their highest point of perfection. For many other natural products this section is noted; but has anybody else realized the unexcelled quality of its product of women?

It would be difficult to find a farmer's house which does not harbor patent medicines. If you go into his cellar, the patent medicine bottles are likely to be heaped in the corners; if you go into his bedroom, they are there; in the kitchen, they are on the shelves and in the cupboard; the ash-pile is topped with them; they stand on the beams in the barn, and, if you go into the woodshed and the smokehouse, lo! they are there.—Dr. John N. Hurty.

PYELOCYSTITIS: THE INTERNIST'S WAY

The surgeon has taken to himself the genitourinary system, leaving to the internist little except the scraps. Far be it from us to decry the results of our brilliant successor's labors in this field, nevertheless we cannot help asking whether in every case the mechanical method is perfectly satisfactory and in its final results leaves nothing to be desired. What!—in every case? Are there no exceptions? Then, indeed, has a new chapter been added in the history of human endeavor.

Man is not merely a "case" but is a human being, having individual characteristics. One of these peculiarities occasionally making itself known is an unwillingness to be despoiled of the various apparatus with which nature chose originally to endow him. We may asseverate never so earnestly that the removal of his palate inhibits further experiences of bad taste, that the abscission of his nose prevents the annoyance of bad smells, and that by similar subtractions he may be relieved of sundry and divers temptations lead-

ing to woful adventures. But it seems he prefers to keep his faculties for suffering, and to acquire wisdom at his own cost instead of accepting it second-hand.

Here is an illustration: A youngish man has pyelitis of the right kidney, infection-cystitis, hyperemic prostate gland, vesical irritability, free discharge of pus from the urethra, besides other symptoms. He has been urged to part with his prostate gland and the affected kidney, to have a drainage-tube inserted into his bladder and renal pelvis, not to mention a pleasing assortment of other surgical "help" that have been proffered. (N. B.: He has money.) To each and all of these seductive suggestions he has turned a deaf ear—and no aurist in reach!

At last he falls back upon the internist.

Upon investigating the situation, the internist finds that the urine is free from blood, casts, and albumin; the urinary solids are excreted in normal quantity and proportions; pus follows after the discharge of clear, normal urine.

Treatment? The use of renal irritants is forbidden; any exercise inducing discomfort or pain is taboo; the man is told to return to his vocation and cease to look on himself as "lost." He is put upon a regimen of one grain of calcium sulphide and 1-64 grain of arsenic sulphide taken before meals and at bedtime, until his urine no longer contains microorganisms. He is to take a grain of arbutin four times a day as long as pus is detected in the urine.

The medical attendant now procures a long-nosed uterine syringe, smooth at the tip —for the normal urethra is sensitive; the inflamed, exquisitely so. He has ready to hand, warmed, an antiseptic (in the shape of a perfect solution of thymol iodide in an aromatized neutral oil), draws a little of it into the syringe, lubricates the nozzle with the same, and then carefully, delicately inserts it into the urethra, pushing forward until the prostate gland is reached. At this point he expels a few drops of the oil, letting it escape from the meatus naturally. If any of it enters the bladder, well and good.

This injection is repeated once every day for about a month or until all undue sensitiveness has subsided. The use of the arbutin is kept up for about six months, or for twenty-four even if need be. The bowels are kept free—the sympathy between rectum and bladder is close.

Results?

Now, if you have enough faith or any curiosity—go ahead and try it yourself. Then you'll write and thank me—possibly divide.

If you haven't—good night!

Was die Welt morgen bringt,
Ob sie mir Sorgen bringt,
Leid oder Freud,
Komme, was kommen mag,
Sonnenschein, Wetterschlag,
Morgen ist auch ein Tag—
Heute ist heut!

A PLEA FOR OPIUM

Medicine seems to have fads and fashions, just as manners and dress have. Formerly it was our habit, as physicians, to use opium to the point of abuse; nowadays it is the fashion to rail against the use of opium at all.

In our recoil from one extreme, we have swung to another. Yet, we believe, that, if the real opinion of the most scientific and successful of our practitioners, and especially of our surgeons, were canvassed, it would be found that they still entertain a great respect for the drug and continue to employ it, or some of its derivatives, quite extensively.

Opium has at least one therapeutic virtue which, to every physician and surgeon of experience, gives it a sovereign place in the treatment of a certain class of trouble—its power to enforce physiologic rest. In this respect, opium has no superior, if it have an equal.

The value of physiologic rest in highly inflammatory and hyperesthetic conditions can hardly be overestimated. Especially is this true of the gastrointestinal tract, the pelvis, and the peritoneum. Anatomic rest is usually sought and insured by the patient himself. Pain forces him to take the posture in which the muscles will be put, as much as possible, out of action. He is glad to lie down, with the skeletal and systemic muscles immobile. But physiologic rest is of even more vital importance in such cases, and this, as a rule, is attainable only by the administration of some form of opium.

Alonzo Clark used to give his peritonitis patients enough opium to make them blue and cause them to snore. That, of course, is a practice hardly to be commended as routine treatment. But any man who has had any considerable experience in the treatment of acute peritonitis has learned the enormous value of physiologic rest; and the same principle applies to all acute conditions of the pelvis and abdomen.

Nobody desires a return to the old excessive indiscriminate use (or rather abuse) of opium'

The therapy which was wont to meet every pain with a shotgun dose of morphine or a dram of laudanum belongs to the dark age of practice, and has properly been relegated to the scrap-heap. But a practice which utterly disregards the drug is equally irrational, especially in view of the fact that one of the principal objections to its intelligent use has now disappeared, namely, the uncertainty and impurity of its preparation and its pharmacology.

The opium of that older practice of which we speak was not standardized at all. Later the drug was standardized upon the content of morphine, then morphine began to replace the crude drug. Then the other active principles of the drug began to be isolated and used—codeine, for instance.

With the pure and accurately standardized preparations of morphine, which are, at least, perfectly possible of production in these days of refined pharmacy (and we can tell you of one preparation, at all events, which measures up to this standard), the physiologic effects of opium can be secured with well-nigh infallible accuracy and balance. And, I repeat, I do not believe there is any adequate substitute for morphine for the relief of pain; all other measures (of a purely therapeutic kind I mean, of course) are mere make-shifts.

I realize, and admit with sorrow, all the tremendous crimes that are to be laid at its door; but I still believe it has a wide range of usefulness and value, if wisely and advantageously employed, in forms and dosage of known standardization.

You can't think too much. It may be somewhat painful to do it. They even say that a man killed himself by thinking, but the chances are if he hadn't thought himself to death he might have been shot in some thoughtless moment or hung for not thinking, so the odds are even in the end.—M. N. Goodnow.

EXPERIENCE AND ENTHUSIASM

It was the late Maurice H. Richardson, we think, who, in an address to a graduating class of medical students, pointed out the wisdom of that order of nature which governed the sequence of intellectual inheritance. "For who could doubt," he pertinently asked, "what would be the effect upon progress if our successors were to begin their work influenced exactly as we are by our own experience, where we lay the work down?"

Experientia omnia docet. Actual experience teaches the individual up to a certain point, and it makes him to a greater or less degree wise. But it also makes him timid, cautious, and disinclined to break away from the traditions of the past. The beginner, who has to learn in the dear school of experience, strikes out for himself. He disregards the warnings of his elders. He does harm, in so doing, in grasping for the good; but he seeks, and obtains, good that is new. He leaves beaten paths and makes new ones. Hit or miss, he brings to bear the originality that is in him, untrammeled by the teachings of a past generation, with an aggressiveness that overthrows all traditions, musty and valuable as they may be.

Following in imagination the course of the individual worker through coming ages (could he retain his bodily and mental vigor and live to be as old as Methusaleh), one must get the conception of a powerful intellect brought to a standstill by the accumulation of the experience of centuries; a body, as it were, which has ceased to move in any new direction, retarded and silenced by its own ideas and environment; not unlike the moon, which, through the friction of its ancient tides, has ceased to rotate on its axis faster than it revolves about the earth—which latter itself will, for similar reasons, one day rotate upon its axis but once a year.

This masterly conception of Richardson has a peculiar application and significance in the case of the medical man. For medicine, of all the practical arts and sciences, is in a constant flux of change and advancement, wherein "the old order changeth, yielding place to new." Here, if anywhere, it is possible for "one good custom to corrupt the world."

For this, if for no other reason, all attempts to legislate or otherwise to crystallize principles and modes of medicine are doomed beforehand to failure, and to the extent that they temporarily succeed they bring worse than failure.

Every physician, the practitioner no less than the research-man, is *de facto* a unit in a body of original thinkers and workers; and to the extent that he fails to exercise this faculty of originality he falls short both of his privilege and his duty.

I do not mean to say, of course, that the doctor is to cut loose from all the experience and wisdom of the ages and rush in where angels fear to tread. However, he is under obligations to use his own brains in his own way, independently of all mere tradition and sheer authority, accepting all that the past and the present offer him as his tools, not as his masters, and fearlessly striking out his own way with their help. So doing, it will

go hard; but, then, he will contribute something new and original to the progress of his science; and such is the democracy of science that the humblest may do this just as well as the greatest.

Incidentally, we expect that our readers, to whom this little homily is addressed, will give the "family" as well as the profession at large the benefit of their original achievements, through the pages of CLINICAL MEDICINE.

"Mistakes creep in." See them, the horrid little things; grotesque dark pigmies, sneaking and crawling into some unnoticed corner where they have no business. See them grin at you after it is too late and they have done their successful creeping, hear their Satanic word chucklings!—Ladd Plumley.

THE MANAGEMENT OF ORCHITIS

The treatment of orchitis, this painful complication of gonorrhea, has received much attention at the hands of clinicians. The suffering it entails demands relief; its supervention complicates the management of the urethral infection; and, if the testicular malady is bilateral, it is almost certain to deprive the victim of the most exalted privilege of manhood, that of begetting posterity.

The classic treatment consists primarily, in immobilizing the inflamed organ by absolute rest in bed, a suspensory bandage, and compresses. The latter may even contain ice, provided a layer of cotton be interposed between the ice and the scrotum.

For years the writer met the local inflammation by applying to the scrotum a 25 per cent solution of silver nitrate. This, it is true, removed the hide, at least a generous layer of epidermis, but the subsidence of the four classic evidences of inflammation was enough to meet the approval of physician as well as patient. The suggestion was at one time made to a student to substitute bismuth subnitrate, mixed with water to a creamy condition, and we found the benefit derived hardly less prompt and decided.

Later on, the addition of that powerful weapon, saturation with calcium sulphide, with its destructive influence over the infective cocci, completed the cure.

It really seemed that the only remaining point to be settled was, whether this perfected treatment would prevent sterility.

Does it do this? Who can tell us? Here is a beautiful opportunity for the application of our favorite method, collective investigation. Many thousands of readers of CLINICAL MEDICINE are adepts in the use of the sulphide calcium. Many have learned to rely upon it in treating gonorrhea. If each one who has done this in cases of double orchitis were to state whether those patients have since become fathers, or could establish a fact that would influence the future of the human race, it would contribute toward a definite answer.

In the French journal, *Le Monde Médical* for June 5, 1913, is given a résumé of recent suggestions:

For the pains, Chauffard uses sodium salicylate, 4 to 5 grains a day; inunctions, three times daily, with a pomade of guaiacol, 5 grains, and petroletum, 30 grains; very hot enemas, suppositories of belladonna or hyoscyamus, or morphine injections. All local urethral treatment must be suspended.

In certain cases one may resort to puncture or incision. Lance advises this for severe forms, in the hyperacute pains and where the general phenomena are intense, for extensive epididymeal indurations in repetitions of acute cases; for old, fibrous, very painful knots. Puncture is harmless and of service in recent cases associated with intense inflammation. It should always be made in very painful cases. Juliusberg advises it for the large nodules of recurrent cases when the patient refuses incision.

The latter may be reserved for grave acute cases with phlegmonous phenomena or when intensely toxic recurrent without urethral reinfection, or old epididymeal lumps that remain very painful.

The general treatment comprises rest in bed, a laxative lactovegetabrian, diet, daily lukewarm baths, the balsams in small doses.

In about fifteen days the patient may be allowed to move about a little, putting on a suspensory bandage before getting out of bed. To favor resorption, iodized inunctions, sitz-baths, massage of the epididymis and cord are in order.

In the April number of *Le Monde Médical* Cruveilhier proposed treatment by subcutaneous injections of Besredka's sensitized vaccine. The result in 14 cases was that the acute pain was influenced so as to permit sleep within twelve to forty-eight hours; and sometimes so radically as to permit return to work; the inflammatory phenomena subsiding correspondingly. By the second or third injection, within a week, no pain was elicited by palpation of the testicle, which had become normal in size and looseness. There may remain a painless lump in the epididymis. A sense of malaise, with fever or chill, followed the injections in four to six hours. Sometimes there was diffuse redness and

tenderness the next day. The injections were made, forty-eight hours apart, in the thigh, abdomen, or back.

We may add that equally satisfactory results in gonorrheal orchitis (as well as in the arthritis and other complications of gonorrhea) have followed the use of the stock gonococcus bacterins, now readily available in this country. Such uniformly good effects follow this treatment that it should be used in every troublesome case—acute in type as well as chronic.

"Hit's no use frettin' w'en things go wrong,
Hit's er whole lot better fer to sing a song;
Jes' take life keerless ez she comes along
An' by-um-by she'll smile!
Den don' cher worry w'en times is tough
An' dar ain't no meat an' de wedder's rough;
Jes' keep a singin' an' yo'll get ernough—
Hit'll come in a li'l while!"

BETTER HOME NURSING NEEDED

Every doctor realizes with what relief he always leaves a seriously sick patient who is attended by a competent trained nurse, knowing full well that his instructions will be carried out to the letter and that she will be vigilant for the slightest sign of danger in the progress of the disease, which, when detected, will be promptly observed and faithfully reported.

But not in all cases, especially those among the great middle classes, and which make up so important a part of the physician's clientele, will the engagement of a trained nurse be practicable. Some patients cannot afford her services, others are not sick enough to make a nurse necessary; and these as well as various other reasons make it certain that one cannot be in attendance in every instance of sickness.

How, now, shall we take care of this great class of patients? The poor are provided for by the State or by charity; indeed, they are much better off in this respect than people of the hard-working, struggling middle class.

It would seem that the only solution to this rather vexing problem is the home-trained nurse; that is, the mother, the wife or other member of the family, properly instructed by the attending physician to take care of the sick person. The mother is the natural nurse of the family, and her degree of proficiency varies, of course, with her intelligence, her sympathy, kindness, firmness, and natural tact. But to these qualities must be added a certain amount of training, if she is to fulfil the demands of modern treatment.

How shall the home nurse be trained? Well, the world of today is a reading world, and much information concerning hygiene and the care of the sick is being acquired through magazines and journals; and doubtless a great deal of positive instruction in home-nursing can be given by means of these channels. Nevertheless, the principal agent of instruction must, after all, be the doctor himself—the family physician. He should teach these home folk how to take temperature, pulse, and respiration; how to examine and report on dejecta and excreta; how properly to feed and bathe patients; even, under circumstances, to use the catheter and the hypodermic syringe. First care to the injured and emergency treatment in poisoning and similar accidents also are appropriate subjects for the instruction of the home-trained nurse.

We are not suggesting, of course, that the home nurse replace or supplant the hospital-trained nurse—no physician who knows the value of the latter would ever think of doing that. However, as stated, there are many, very many instances where the service of the trained nurse is either impossible or unwarranted, in which the doctor is obliged to depend upon the attendance of some member of the family.

On the strength of the maxim, "In time of peace prepare for war," it is a good idea for the family physician to give these home folk instruction in the art of nursing from time to time, as opportunity offers. During a protracted case of confinement is an excellent time to instil information, both as to the routine care of a patient, and also as to what to do in case of emergency.

We repeat that in serious cases the patient should be entrusted only to the hospital-trained nurse; on the other hand, it is our belief that such training of home women would go far toward alleviating the condition of middle-class people, while insuring to the doctor intelligent and efficient assistance where the services of the trained nurse cannot be had.

There need be no fear that such knowledge imparted to the laity will lessen the physician's practice or beget anything like presumptuousness in the person so instructed. It may operate that way in a few individual instances; so it does, occasionally, with the trained nurse. But in the main its effect will be just the reverse. A little insight into the wonderful science of medicine as a rule inspires the layman with just that much the higher respect for the doctor who helps them in distress and forewarns them of danger.

Leading Articles

Bettering The Doctor Himself

By MAYNARD A. AUSTIN, M. D., Anderson, Indiana

EDITORIAL NOTE.—"How Can I Increase My Income?" This is a question which nearly every doctor is asking himself at the present time. There can be no doubt that the tendency as regards the average income of the doctor is downward. Physicians generally are complaining of hard times, and of the difficulty of making ends meet. They are anxious to know how to check this lessening of income. It is to help the man in the field that we have arranged for a series of articles upon this general topic, of which this one by Dr. Anderson, upon "Bettering the Doctor Himself," is the first. As he so clearly points out, the man who desires to earn more must be worth more. The general methods of increasing personal worth we will let Dr. Anderson tell you.

THE author of this article had occasion, a few years ago, to spend several months visiting the physicians in three of the best states of the middle West.

One of the things that surprised him most was the large number of unprogressive practitioners in every town, and the proportion of active and inactive members of the profession was about the same almost everywhere. That is, a city having fifty physicians would have ten making good in professional and financial ways, while of the forty others some would be making a bare living, others not making a living at all, and the rest, if fortunate, were living with their wives' relatives.

In many lines of professional work, a man's personality probably counts for more than it properly should. In law and medicine, results speak for themselves, and personality without ability will ultimately bring its possessor to humiliating defeat. Ability without personality spells success in only a limited degree, while ability with personality and progressiveness will place their possessor in the front rank at all times.

The physician is placed in a peculiar position from the outset of his professional career, in that personality is his sole asset for getting business. All too soon the young physician finds out that much of his time is spent in worrying over minor cases and trivial affairs, and, so, his mind very soon becomes fixed in the idea that nine out of every ten of his patients would recover anyway, even if they had no medical attendant save Dame Nature aided by a little common sense. Furthermore, those of his community who choose to consult him in sickness are, or they soon become, personal friends, and if he is a trustworthy fellow they generally stick to him even when his judgment fails them.

But, this apparent fatalism inevitably brings with it a lessening desire for progress, or, rather, the ninety percent of successes which he has (and with which his help has had little or nothing to do) outweigh his ten percent of flat failures; and, yet, if he would only think the matter over carefully, *it is the dissatisfied patient that always brings the other doctor the most money and business—if the other doctor does succeed.*

It may be a fact, and undoubtedly it is, that not ten in a hundred of our patients require an examination when they consult us. It may be, and undoubtedly it is, a fact that bread pills or sugar of milk or pink pepsin water would cure the same ninety patients. Yet, which of these hundred has a heart lesion, or a trace of albumin or of sugar in the urine, or an undiscovered growth in the abdomen, or a floating kidney, or a latent syphilitic infection, or an incipient case of tuberculosis we do not and can not know until we have made an examination of each of them.

The old rule of consultation free possibly had much to do with starting this neglectful attitude; the patient expected to pay little or nothing for what he got, and he got little or nothing for what he paid. However, a plan that has been followed for a number of years has eliminated this floating class of patients who are looking for information for which they do not want to pay. Their attitude of approach usually betrays them when they come into one's office. They name all the doctors who have examined them and how many things the doctors have found wrong.

But one should never refuse to make an examination for anyone, because it might reveal something unusual and lead to valuable experience later on. If a visitor belongs to this floating class of patients who are looking for free information, we always tell him it will be necessary to make another examination a few days later and what our fee will be when examination is completed. Then, if he really wants to know our opinion, such a one will come back and have the money with him.

Not long ago a woman came to me who said that I was the fifteenth doctor she had had in seven years. She was a most interesting study, taking three, but highly profitable, hours of my time. She was a sociologic problem that surely would have interested Freud, while in addition having several definite conditions demanding direct medical attention. The things I found wrong were of long duration, but had never been discovered—because, forsooth, none of the previous fourteen physicians consulted had ever given her other than a pelvic examination.

It is humiliating to a consultant to find his opinion directly opposite to one expressed by some of his personal friends, and, yet, it is a common occurrence to get a patient whose trouble is found to be entirely different from what someone else has treated him for, but (possibly for a long time) without any kind of examination whatever.

Specific Examples of Medical Superficiality

A series of cases of this nature would be an interesting study, and a few such that have come under my observation of late may serve to illustrate my point.

Patient with stomach trouble and gallstones (?): had lues, associated with visceral crises.

Patient with indigestion and liver trouble (?): had a heart lesion, with passive congestion.

Patient with intestinal trouble and indigestion (?): was a neurotic and had colitis.

Patient with fibroid and hemorrhages (?): had a miscarriage, and got well.

Patient with neuralgia of stomach and constipation (?): had three hundred gallstones.

Patient with nervous prostration (?): had pernicious anemia.

Patient with malaria (?): had no plasmodia in the blood, but was suffering from pyemia.

Patient with typhoid fever (?): had pyelonephritis.

Patient with appendicitis (?): had typhoid fever.

Patient with floating kidney (?): suffered from complete enteroptosis, was a neurasthenic and a weakling—all probably owing to a repressed sexual life.

And what does all this teach us? We should learn that nothing less than the most rigid examination and closest attention should be given every patient who favors us with his call. It may be that the routine of normal urine examinations may become monotonous; but, if we get a case of incipient Bright's disease, and can handle the patient properly, it means that we have added several years to his life expectancy.

Bright's disease is a condition that lasts for years and is considered seriously because only the terminal symptoms and signs are observed by the average physician. Two cases of interstitial nephritis in a family of nephritics have been watched for ten years and these subjects are better now than at any previous time. These two patients have not been "treated" all this time, but they have been watched and advised and had that which was necessary to relieve the kidneys when they showed signs of failing.

The best-paying part of medical work is not dispensing of medicaments, but the cultivation of a high grade of patronage, who are advised to obviate getting sick by keeping in touch with their physician whenever a questionable condition appears.

No special advice can be given to any class of men other than relatively, but there are a number of things that can be said about "bettering the doctor himself" that would make him what the average doctor is not.

Better Remuneration for the Doctor

First in line, I would say that the prevailing fees in the average doctor's practice are insufficient to act as an incentive for him to

do more than listen to the patient himself make a diagnosis of his own trouble, and then to prescribe for what the patient thinks is the matter. It is a little more trouble, of course, to examine the chest or abdomen of a patient who says he wants some medicine for indigestion; still, it is a fact that patients will pay to be told what is not the matter with them, as often as when they are told what the cause of their trouble is.

There are men who apparently are making money out of a twenty-five- and fifty-cent prescription business and dispensing their prescriptions—the same as the twenty-five-cent visit and examination that some life insurance companies ask for. One of the latter's examiners told me recently of making twenty-eight examinations in one day. I asked him what the examination consisted of, and was informed that if the persons could walk and talk they were "passed."

Danger in the Neglected Patient

However, a neglected patient makes more enemies for any physician than a whole dozen satisfied ones can overcome. This twenty-five-cent business, while possibly a necessity in the case of some doctors and some patients, can be eliminated if the doctor possesses ability that is worth a greater fee when he is charging. How? By giving the twenty-five-cent patient a dollar's worth of service at every consultation, and charging him a dollar for it. If an applicant is a worthy patient, but can not pay all that our services are worth, his friendship should be kept, but at the same time giving him to understand that we are helping him because he and his family are worthy of the best care, even if he cannot afford to pay what that care is worth. This class of patients should be charged a dollar for a dollar's worth of work, but whether the account is worth a ledger-page the physician himself is the only one who can decide.

The best reputation a physician can have is not necessarily that which makes him out a good fellow and big-hearted enough to go to see any sick person at any time and any where, but that of being honest enough to give a dollar's worth of service for every dollar charged. If this is known, then the patient with a dollar to spend is going to spend it with the doctor who has been giving a dollar's worth of service for that amount, and not to the doctor who is charging only twenty-five cents for advice and medicine, all told.

Second. Among the causes of poor business and of poor doctors is poor equipment. No matter what the young doctor's financial strain may be or has been, he seems to be fortunate in enjoying unlimited credit. Leastwise the book-agent and many supply-houses assure him of this whenever he needs anything in reason. Much junk often is accumulated by the good buyer, but I know of nothing that does not pay for itself many times over in the usual enthusiasm of trying out new things upon patients, who may receive full value perhaps only from a psychic standpoint.

There are certain things without which no doctor can get along and give his patients full value for what he charges. It may be that a microscope is not used every day, but what it is worth to the doctor himself is even more than its value to the patient. Much of our laboratory work is confirmatory rather than diagnostic—or should be, if it is not that.

The practitioner should be a clinician first, a laboratory-man afterward, and his laboratory need not be very extensive to be of the greatest practical value. A microscope, stains for blood, reagents for urine, stomach and fecal analysis, a blood-pressure apparatus, blood-counting apparatus, and a hemoglobin index are positively necessary. Widal and Wassermann tests and tissue examinations should not be undertaken, though, by anyone having this work to do at infrequent intervals.

Furthermore, a stomach-tube, rectal tube, and catheters should be on hand and in good shape for use at any time. It is true these goods decay when not used (and one may seldom have use for them), but we are being paid to have them when called in an emergency and the instruments are required. The same with a set of Barnes's bags in the obstetric grip, and the catheter for tracheal insufflation. This latter, by the way, may be used as a repositor for a prolapsed cord or a tractor in a breech-presentation at childbirth.

The Neglected Library

The third factor, I would say, is an apparent lack of respect for medical literature—or, rather, a lack of knowledge of how to use it properly.

A few years ago, when medical journalism was not on such a high plane as it is at present, there were a number of journals that enjoyed an unrivaled circulation, because their advertisements permitted these periodicals an unlimited gratuitous circulation. Some of these journals contained much that was of more practical value to the general practitioner of that period of medical education than some of our present, more cultured

periodicals. Still, journals, like other things, may become too familiar, and familiarity breeds contempt; if not that, this familiarity induced a lack of respect that permitted the doctor to get the habit of neglecting his other journals.

We all are familiar with the average doctor's desk—a pile of journals, advertisements, bills, circulars, what not—accumulations of an unknown cycle of years. Some of the journals are marked, as containing articles that are worth keeping, others contain articles that have interest but were laid aside for lack of time or inclination to read them. When time does present itself, inclination happens along, or a given article has a practical value in a present case in hand, the journal containing it is mislaid and seldom found in the disorderly pile.

All this can be obviated by a little systematic daily work. Any journals can be gone through in a very few minutes and then, instead of keeping the whole journal, it should be properly dissected and, after advertisements, and uninteresting, unimportant and otherwise useless pages have been consigned to the waste-paper-basket, a few clippings may be all of interest that the number can add to one's library. These clippings can be filed in a cabinet, in large manilla envelopes, and indexed according either to special, anatomic or pathologic headings. Every physician, of course, will of necessity make his own choice of subject-material, this varying as to his needs or practice.

The use of indexes rerum, scrapbooks, and permanent filing devices are unsuited ordinarily, for the reason that little of the material clipped remains of value for any length of time. One article or reprint may supercede all that has been saved previously to that; and this fact permits of a constantly new reference-library, with no old material to wade through, since the old material is thrown in the waste-basket as soon as it is superceded by the newer, better or more comprehensive articles or monographs.

I wish to say a word about loading one's shelves with books—it is surprising how much junk there is foisted upon physicians, in the shape of new editions and new works that contain possibly not a dozen pages of new material. A friend of mine bought a new book containing, as he was told, much new material on a certain subject over which he happened to be enthused. On looking through his library, we found the subject-matter considered fully in three other of his books, and much better in a recent journal review.

A few periodicals well digested are sure to be several years ahead of any textbook, and the habit of buying many volumes of general medicine or surgery to get a little special information is a waste of money, unless one buys his books for furniture effect. It is not the size of a man's library, but its availability and practicability, that makes it worth while and valuable; and the only way to keep in touch with the newer things is proper utilization of one's journals.

Self-Improvement in General Practice

Fourth in the matter of "bettering the doctor himself" is that which pertains directly to making his work more competent and adds to his skill as a practitioner. Specialists require a prolonged training and make their plans accordingly, but the greatest man in the profession is the conscientious general practitioner whose advice may be sought before a specialist is consulted.

The value of postgraduate work is unquestioned, but the work done by the average practitioner taking a postgraduate course is not that which gives him the most that he can get to benefit him for the time and money he spends. Dr. G takes a special course in the diseases and surgery of the rectum, when he doesn't see one case of piles in a year. Dr. X takes special work in G U, when his patronage does not include many of these unfortunates. Dr. Y takes a course in the diseases of women, watches a dozen vaginal hysterectomies, and ignores a torn perineum. It is not that they are not better off for knowing all that they can learn, *but a man should go after experience in those lines in which his field of work will allow him to broaden himself.*

Obstetrics and obstetric surgery—oh! how many mothers would have been saved lifelong suffering if our colleges had demanded that the *graduates should know how to care for the expectant mother*, and not that they should have made examinations and been present at three or ten or more confinements.

We have been called to use the forceps in cases not even in the first stages of labor—we have been witness to unnecessary tears and infections—we have seen embryotomies and dead mothers, where there should have been successful cesarean sections. If there is one great need in medical teaching, it is a revolution that will make better obstetricians of our graduates in medicine. Two lives are always at stake, and many are the sacrifices.

The general practitioner has his greatest field for advancement at his own door. He neglects his chronic cases, he overlooks complications in his acute cases, he utterly fails in the majority of instances to utilize a wealth of valuable clinical material that comes to him and pays him to do what he pays for the privilege of doing when he takes a post-graduate course.

Every patient should be exhaustively studied, not only as an individual, but as a type and one of a certain family that may show pathologic tendencies or certain physical defects. Making a family-history and keeping case-histories may be monotonous, but their value will pay compound interest many times over in the years to come. More than that: there is one other thing we must not fail to remember, namely, that it is always the patient whom we must treat and please—not a case and a disease.

And, finally, if we are failures in any way, and we have been blaming environment, luck or any other of the commoner misalliances for our defeat, we must stop and think that we can often be what we strive to be, in spite of what may seem an unsurmountable barrier.

Our struggle should always be to better ourselves in the situation we have chosen for our environment, and not to wish for impossible or improbable things. A three-thousand-dollar practice in a village far often is a greater happiness than a ten-thousand-dollar city business. A member of the town council or school board is often as honorable a position as a college professorship. A bit of philosophy often opens to us vistas of green fields that have appeared brown and barren before.

Epictetus tells us: "Remember at any thing that shall befall thee, turn to thyself and seek what faculty thou hast and make use of it—Self-Mastery, Perseverance and Patience should be thy wont."

Diabetes Mellitus: Its Treatment

By W. C. WOLVERTON, M. D., Linton, North Dakota

EDITORIAL NOTE.—Last month Dr. Wolverton gave us, in outline, the modern hypotheses regarding the nature of diabetes mellitus—what causes it and its pathogenesis. This month we have the application of those facts—a careful, clearly thought-out method of treatment built up on scientific lines. Read the two articles together—even if you have to read the first installment over again.

II

[*Continued from page 809.*]

THE treatment of diabetes may be considered under four headings, namely, prophylactic, hygienic, dietetic, and medicinal.

As to prophylaxis: The careful physician who makes a thorough uranalysis a routine procedure in formulating his diagnoses will occasionally find a specimen of urine containing only a trace of glucose. Repeated examinations will show that this is not a constant condition for that individual, and investigation reveals that this transient glycosuria occurs only after the ingestion of an unusually large amount of carbohydrate food. This, then, is not a case of true diabetes, but comes properly under the head of alimentary glycosuria; however, if this condition is allowed to continue, true diabetes is likely to ensue. The remedy is obvious—prophylaxis. Regulate the person's diet, keeping the carbohydrate intake within safe bounds; meanwhile searching diligently for the underlying causative factor.

The hygienic treatment consists in proper exercise and bathing, temperance in eating and drinking, the wearing of clothing suitable to our variable climatic conditions; in short, it consists in right living.

In beginning the treatment of a diabetic subject, one should form a definite idea of the severity attained by the disease. The amount of sugar being excreted should be determined from 24-hour specimens of the urine, using Fehling's solution or the fermentation test.

The next step, in seemingly mild cases or in the absence of acetone and of diacetic acid, is to place the patient upon a carbohydrate-free diet, such as presently will be mentioned. If the case is a severe one or if evidence of acidosis be present, then the patient should gradually be deprived of carbohydrates and cautiously put upon the "diagnostic diet"; this including the following articles:

Fresh meats of all kind, including beef, mutton, pork (except sugar-cured ham), etc., *but not the livers;* game and fowl of all kinds, except their livers; fish and shell-fish of all

kinds, except oysters; fats and oils, including butter, washed cream, and olive-oil; meat- and clam-broths, but made *without flour;* gelatin-jelly, flavored with oil of lemon and citric acid, and sweetened with saccharin; tea and coffee, with washed cream and saccharin; water and carbonated waters (natural or artificially prepared). Sugars and starches, as also all articles of food and drink not specifically mentioned in this list must be avoided.

The foregoing dietary should be continued, with daily uranalyses, until sugar is no longer present, or until it declines no further and it becomes evident that it cannot be made entirely to disappear. In either event, the desired information can usually be obtained within a week, or often within three or four days.

With the disappearance of the glycosuria or its reduction to a minimum, a piece of bread $2 \times 3 \times \frac{1}{2}$ inches should be added to the dietary three times daily for three days, at the same time making daily uranalyses. At the end of this three-day period, the amount of bread should be gradually increased for each succeeding three-day period, with continuation of the daily uranalyses, until sugar reappears in the urine (or until its amount begins to increase, if it never had entirely disappeared under the "diagnostic diet"); that is to say, until the limit of glycolytic capacity (ability to metabolize sugar) has been reached.

List of Foods Permitted to Diabetics

In the *mild* cases, the subjects are now placed upon a "moderate routine diet," this including the following list: Fresh, salt, and cured meats of all kinds, including beef, corned beef, dried beef, tongue, mutton, pork, sausage, ham, bacon, salt pork, tripe, etc., except sugar-cured meats and the livers; game and fowl of all kinds, except their livers; fresh and cured fish and shell-fish of all kind, except oysters; fats and oils of all kind, including butter, cream, olive-oil, peanut-butter, etc.; broths, and meat, vegetable, and cream soups of all kind, but without starchy thickening or sugar; gelatin- and Irish-moss jellies, flavored with fruit-juices or acid wine and sweetened with saccharin; eggs in every form, except as omelet containing flour; milk, buttermilk, soured milk, fermented milk, cheese of all kind; fresh vegetables, including spinach, cabbage, cauliflower, Brussels sprouts, onions, soft green corn, mushrooms, celery, radishes, lettuce, cucumbers, pickles, chow-chow, watercress, tomatoes, etc.; acid fruits, such as lemons, apples, cherries, gooseberries, currants, etc.; tea, coffee, water, carbonated and saline waters; brandy and whisky, in proper quantities, if required; cream and saccharin may be used.

To the proper amounts of the foregoing, add, three times a day, a piece of bread or toast, the amount to be specifically prescribed. For the bread or toast, there may be substituted, in whole or in part, potatoes, rice, oatmeal, cereals, but only as directed. Sugar in every form must be avoided. Starches, except as specifically mentioned, and all foods not mentioned in this list, must be avoided. The quantity of bread consumed should be just as little below the glycolytic capacity of the patient as safety will allow.

The 24-hour urine should now be examined once a month.

In "*borderline*" cases, in which the severe type of the disease is approached, it is well to put the patient one day of each week upon the "strict routine diet"; to wit:

Fresh meats of all kind, except the livers; game and fowl of all kind, except their livers; fish and shell-fish of all kind, except oysters; fats, including bone-marrow, oils, butter, washed cream, etc.; cheese, buttermilk, soured milk, curds, fermented milk (*no sweet milk);* broths and soups made from meat, heavy cream or vegetables, but without starchy thickening; gelatin-jelly, flavored with lemon-juice and sweetened with saccharin; eggs in every form, except as omelet with flour; nuts of all kind, except chestnuts and peanuts; fresh vegetables, including spinach, cabbage, cauliflower, Brussels sprouts, stringbeans, tomatoes, young onions, asparagus tips, celery tops, lettuce, watercress, dandelion "greens," cucumbers dill-pickles, etc.; acid fruits, including lemons, limes, apples, cherries; olives; such liquids as tea, coffee, water, carbonated and saline waters; whisky and brandy, if required. For sweetening, saccharin is to be used; heavy cream is permissible. Starches and sugar in every form must be avoided, as also all foods not specifically mentioned.

This list does not exclude every form of carbohydrate; still, it is as strict a diet as can be continued for any considerable length of time by the diabetic.

The Caloric Factor in the Diet

In the *severe* cases, the "strict routine diet" must be followed; but not infrequently it is necessary to add particular foods, including a certain amount of carbohydrate, in order

to avoid toxic acidosis. In these severe cases, the caloric requirements of the patient must be estimated, and the quantities of the various foods definitely specified, in order that the food ingested may meet the tissue requirements of the patient.

Here it is especially necessary to push the fats to the limit of the patient's ability to assimilate them; and because of their high caloric value they are especially valuable in replacing the taboo carbohydrates. Here, too, alcohol many times finds a useful place, as it it said to be particularly valuable in facilitating the metabolism of fats.

In calculating the caloric needs of a diabetic, it must be remembered that a sufficient excess of food must be consumed to offset the loss of glucose through the urine. Otherwise there will be a metabolic deficit, which nature will make up by a destruction of the patient's bodily tissues.

This "excess feeding" is to be determined by calculating the caloric equivalent of the glucose lost in each 24-pour period, as shown by a quantitative sugar estimation. In doing this, allow 18.2 calories per pound of the patient's body-weight. In the estimation of the caloric value of various foods, *Rubner's factors* are these: 1 Gram of protein yields 4.1 calories; 1 Gram. of fat, 9.3 calories; 1 Gram of carbohydrate, 4.1 calories.

Get Atwater's statistics of the caloric value of the various foodstuffs; they can be obtained from the Department of Agriculture, the charge being 10 cents.

Exceptions and Modifications

In severe cases of diabetes, it is wise, and often absolutely necessary, to relax at times the stringency of the dietary and to allow a reasonable amount of carbohydrate food. This precautionary measure goes far toward preventing acidemia and consequent coma; and it is imperatively demanded upon the appearance of the premonitory symptoms of acidosis, such as dizziness and headache. Whenever diacetic acid is found to be present in the urine, with or without evidence of impending coma, sugar must be added to the diet, and sodium bicarbonate administered in large amount (2 to 3 ounces daily), either by mouth, enema or by intravenous injection, as the exigencies of the situation may demand.

It seems to have been demonstrated—and it is well to bear this fact in mind—that the greater the amount of proteid diet, with absence of carbohydrates, and the greater the amount of fats ingested, the more acetone will appear in the urine; while the greater the amount of carbohydrates ingested, the less acetone will be found in the urine.

As regards the matter of substitutes for bread, a few remarks made upon the subject of "gluten flours" are called for. It is possible to make, commercially, a flour composed largely of gluten, and such flours may be procured; but the article is of low caloric value, is unpalatable, and the patient soon tires of it. Nearly all of the gluten flours, so called by their sponsors, are fraudulent, containing, as they do, large proportions (35 to 50 percent, or even more) of starch.

Bread, biscuits, and so on, made from almond-meal from which the sugar has been removed may be tried, but the patient soon tires of these substitutes. Potatoes, well boiled, often will enable the patient to do without bread; they contain only 8 percent of starch, and may sometimes be allowed when all other starches are withheld, unless glycosuria persists. There is a "flour" made from edible pine-nuts (Chicago "sanitary flour"), which contains 7 percent of carbohydrate, in the form of cane-sugar; if raised with yeast, most of the sugar is decomposed, until only about 1 percent is left. This flour makes a very palatable, edible bread.

Sometimes in mild, and even in some severe cases, the patient will tolerate small quantities of levulose and lactose, and he may receive these in the form of sweet fruit, fresh milk, and so on. Trial is the only means of judging of their usefulness in the individual instance. Saccharin should be employed for sweetening foods and drinks; but it must be remembered that it is offensively sweet, and is least objectionable when used in exceedingly minute quantities. Saccharin may be procured in tablets of 1-4, 1-2, and 1 grain each, respectively.

In the severe cases of diabetes, that is, those in which the patients do not become sugar-free on a fat-protein diet, an unusually difficult problem is presented. These patients elaborate sugar from the carbohydrate portion of the protein molecule, so that in some instances as much as 80 percent of the ingested proteid is converted into sugar, while even the body-proteids may be attacked. Such patients at times may show an intolerance for proteid equal to that for the carbohydrate, according to Naunyn, so that for them a restriction of proteid food becomes an essential part of the treatment.

For these individuals, the range of dietary, therefore, becomes greatly restricted, and the closest watch must be kept for signs of

dangerous acidosis; and though we should persist to the limit of prudence to render the urine sugar-free, this must not be done at the risk of producing coma or too marked undernutrition. The greatest judgment must be exercised under these circumstances; still, with care and patience one may often have the satisfaction of seeing a severe case assume a mild or moderately severe form. To render these patients sugar-free, starvation days, fat-vegetable days, or at times oatmeal days, or a series of these in conjunction may be resorted to.

In those severe cases in which the patient craves milk but cannot tolerate it because of the lactose it contains, "Williamson's milk" will be found a good substitute. Prepare as follows: Shake thoroughly 4 ounces of fresh cream with 1 pint of water, then set aside for two or three hours; then skim off the cream. Now add the white of 2 eggs, beaten up in 8 ounces of water, to the cream; add salt and saccharin (or levulose) according to taste.

Reason for Restricting Carbohydrates

The object of the restriction or exclusion of carbohydrates from the diabetic's dietary is, that it obviates the losing of sugar on his part, while, through the substitution of fat, he is supplied with a material that, owing to the special character of his perverted metabolic functions, he cannot so easily squander. It is only in the most severe cases that a loss of sugar accompanies such a diet, and then only to a slight degree.

The diabetic "recovers his balance," gains strength, for he now receives a diet of which he can dispose physiologically; while before, under an unrestricted or incompletely restricted diet, with consequent excessive sugar production, he dissipated and lost the greater part of its nutritional value.

It is of the greatest importance to keep the urine of a diabetic subject free from sugar. It is a fact, proven by the experience of competent observers, that the danger of complications may be remarkably minimized if it is possible to keep the urine entirely sugar-free. It is not the final small loss of sugar with which we are concerned, but the problem is, *reduction of the hyperglycemia.*

As a general rule, the slighter the attack and the greater the hope of eventual recovery, through the avoidance of unnecessary irritation of the controlling factors, the stricter should be the dietary regulations. On the other hand, more latitude must be allowed when the condition is severe, in order to avoid the incidence of acidemia. But even here it is well at first to try to render the patient aglycosuric by the gradual exclusion of carbohydrates and a reduction in proteins, and the employment of the "oatmeal cure." In this way, even the severely affected may be converted into a milder type, and a certain tolerance for carbohydrates is built up.

In the severe cases, a weekly "fast-day," or "rest-day," is a valuable adjunct measure. On these days, the patient rests quietly in bed, taking only weak tea or maybe a little whisky or brandy. Almost all diabetics will become aglycosuric following these fast-days. There should also be "vegetable-days," when only vegetables, plus some bacon, butter, and perhaps a few eggs (or, better, the vegetable protein, glidine), are eaten.

In regard to the socalled "oatmeal cure," von Noorden, its originator, has laid down certain rules, which must be closely followed if beneficial results are to be expected. First of all, an important preliminary is, to reduce the glycosuria as much as possible by previously diminishing the intake of food very markedly.

A few "vegetable-days" frequently are sufficient; but often it is necessary, in addition, to let a "fast-day" precede the "oatmeal cure." Then oatmeal is given (say, an ounce daily, at first) for not to exceed three days. A "fast-" or a "vegetable-"day should follow the oatmeal-days. Then the oatmeal should be given anew, when it will usually be found that a considerable tolerance to this food has been established. The "oatmeal cure" should be reserved for the more severe cases, and it must not be followed continuously, but periods of not more than three days each are to be interposed between other periods of strict diet.

The Medicinal Treatment

The great stress laid upon the dietetic treatment of diabetes has crowded medicinal remedies into the background, especially since we have no real specific for this disease; nevertheless, there can be no doubt that drugs, when properly used in conjunction with systematic dietary restrictions, do produce favorable results, in some instances symptomatic cures continuing for many years being accomplished.

The one drug above all others which has long maintained a reputation for usefulness in this condition is *opium*, or *codeine* as its favorite alkaloid. There can be no doubt regarding the benefit which some patients at

times derive from codeine: thirst and hunger are relieved, polyuria and glycosuria decline, sleep is improved, strength and weight are augmented; albeit, increased constipation and lessening of the appetite are the price paid for those benefits.

To be effective, codeine must not be given until proper dieting has reduced the glycosuria to about 20 Grams in the day; then give from 1 3-4 to 2 1-4 grains daily, in divided doses. The glycosuria disappears entirely. If the glycosuria disappears or is materially diminished, or else if no impression has been made after a reasonable length of time, the codeine should be reduced or suspended, as the case may be. This alkaloid is a remedy which should be reserved for the severer cases; in the mild ones it is not needed.

Von Noorden has found *aspirin* very effective in reducing the glycosuria, but cautions against its use if nephritis be present. He considers this drug second in value only to codeine. Begin with 10 grains three times a day, and increase the dose to 15 grains, carefully watching for toxic symptoms.

Arsenic has long held a place in the treatment of diabetes. The preparation almost universally recommended is the bromide of arsenic, in the form of Clemens' solution, and has thus been recommended by such men as Tyson, French, Flint, and Potter. The dose of the solution (Clemens') is 3 to 5 minims, once or twice daily. Fowler's solution of potassium arsenite has also been widely used; it is recommended that it be given in small doses over a long period of time, rather than to try for the physiologic effect at once. Barclay's new arsenic preparation, liquor arsenii compositus, should be of great value in these cases.

Iodine, that protean remedy, must not be forgotten in treating the malady we are considering. Lorand, of Carlsbad, tells, in a recent issue of the *Journal des Practiciens*, how he has used it in diabetes of the aged with surprising results. His first case was that of a man of sixty years who had marked arteriosclerosis, which condition induced Lorand to prescribe iodine. To his surprise and pleasure, the sugar disappeared from the urine of the patient.

Shortly afterward Lorand had a woman of fifty-five years who had a resistant asthma in addition to her diabetes. To meet this asthma, Lorand tried iodine, and again the sugar percentage notably diminished. In a third case, he tried iodine again, although there was no prominent symptom save the excess of sugar in the urine, and was again rewarded by excellent results as to the diabetes.

This experienced French therapeutist is inclined to the belief that iodine has some specific influence upon the arterial circulation of the pancreas, and advises his colleagues to try the familiar drug in all cases of diabetes in the aged.

Rudisch (*J. A. M. A.*, Oct. 23, 1909), finds that *atropine* has a more marked influence upon sugar excretion than any of the drugs he has hitherto tried. With it, the glycosuria disappears much more rapidly than with a carbohydrate-free diet alone; and when, with cautious increase in carbohydrates in patients whose urine has become sugar-free, sugar reappears, it is often possible to suppress the sugar solely by atropine without reducing the carbohydrates.

Of the sulphate of atropine, his initial dose was 1-150 grain three times a day; and this was gradually increased, in some cases, up to 1-20 grain three times a day. Often a third of the maximum dose accomplished all that could be desired. Rudisch found that the methyl-bromide of atropine was better tolerated than was the sulphate, and that an initial dose of 1-8 grain t. i. d., could safely be increased by 1-16 grain at a time until 1-2 grain was being taken t. i. d.

Uranium nitrate has been used with success by a number of observers. It is to be administered in doses of 1-2 to 2 grains, t. i. d. "Merck's Manual" places the dose at 3 to 8 grains, cautiously increased to 15 grains, two or three times daily, after meals. This drug, like aspirin, must not be used in the presence of nephritis. A. G. Hopkins (Burlington, Iowa) declares that, to all intents and purposes, he has effected a cure in three unmistakable cases of diabetes, by the use of this remedy, in combination with jambul. He recommends:

Uranii nitratis.....(dr. 1 to) drs 2
Fl. ext. jambul seminis..(fl. dr. 1 to) fl. drs. 2
Glycerini.....ozs. 2
Aquæ dest., q. s. ad.....fl. ozs. 4
M.; ft. sol. Sig.: fl. dr., p. c., t. i. d.

S. G. Soules, in *The Medical Record*, states that fluid extract of chimaphylla, 2 drams in a glass of milk t. i. d., caused the complete disappearance of glycosuria after twenty-three days of treatment. After the glycosuria disappears, then he recommends adding arsenic to the treatment. Of course, dietary restriction is essential to the success of the treatment. The active-principle practitioner will doubtless think, ot once, of chimaphiloid.

Hare recommends *jambul*, in doses of 5 to 30 grains of the powdered drug, or 1-2 to 2 drams of the fluid extract. He asserts that the best results are obtained when used in connection with an exclusive meat diet.

Another practitioner, Faulds, asserts that he has employed with success, in 15 out of 16 cases of diabetes, an infusion of *eucalyptus flowers*, using 4 drams of the drug to 6 ounces of water. One such draught is to be taken twice daily. He claims that oil of eucalyptus or eucalyptol will not produce the same results as the infusion of eucalyptus flowers.

Antipyrin, in full dosage, is of undoubted value in many instances, reducing glycosuria and polyuria.

Waugh writes that he obtained his best results from *strontium lactate*, 20 grains t. i. d. One of his "cures" remained aglycosuric for five years, under only slightly restricted diet.

Remedies for Special Symptoms

Coming now to the treatment of individual symptoms: Sodium salicylate is said to be the best single remedy for the *pruritus;* it is given in dose of 1-2 dram t. i. d. The itching parts should be bathed frequently with hot water and soap; then a solution of thiosulphate (hyposulphite) of sodium, 1-2 dram to the quart, is to be applied. A dusting powder consisting of orthoform, 10 percent in talcum is of value. But above all things, in diabetic pruritus, endeavor to reduce the glycosuria.

For *anorexia*, give strychnine, perhaps best in the form of the triple arsenates of iron, quinine and strychnine. Dilute hydrochloric or phosphoric acids, largely diluted with water, are indicated in excessive thirst.

Constipation is best relieved by laxative saline waters; the artificial preparations answering quite as well as the natural ones. A saturated solution of magnesium sulphate may be prepared, dilute phosphoric acid and saccharin added, and oil of cinnamon to flavor. In this way a nauseous drug may be made fairly palatable. There are, however, palatable effervescent preparations available, which answer every purpose, and are always to be found in a well-conducted pharmacy.

Sulphocarbolates are indicated in *intestinal fermentation and putrefaction.* Here also should be tried cultures of the Bulgarian lactic-acid bacilli—a reliable culture can be obtained under the trade name of galactenzyme.

For *boils and carbuncles*, calcium sulphide is of undoubted value; inoculations of stock bacterins containing staphylococci and streptococci should be injected subcutaneously.

When *acetone and diacetic acid* begin to appear in large quantities in the urine (warnings of impending coma), large amounts of sodium bicarbonate are imperatively demanded; as much as 2 or 3 ounces of the drug must be given in the twenty-four hours. *Give sugar.* Administer whisky or brandy freely. Keep the bowels active.

In the presence of actual *coma*, bleed to the extent of 24 to 32 ounces, and replace, by intravenous infusion, with an equal amount of a 2-percent solution of sodium bicarbonate in physiologic salt solution. Give a stronger solution per rectum, by the Murphy drip-method; also by mouth, if the patient can swallow. If the patient recovers, the diet for the first week should contain carbohydrates, the quantity of sugar in the urine being disregarded. After that, however, he must return to his formerly special diet.

A Prayer

By LOUIS UNTERMEYER

God, though this life is but a wraith,
Although we know not what we use,
Although we grope, with little faith,
Give me the heart to fight—and lose.

Ever in conflict let me be;
Make me more daring than devout;
From sleek contentment keep me free,
And fill me with a buoyant doubt.

Open my eyes to visions girt
With beauty, and with wonder lit;
But let me always see the dirt
And all that spawn and die in it.

Open my eyes to music; let
Me thrill with spring's first flutes and drums;
But never let me dare forget
The bitter ballads of the slums.

From compromise and things half done
Keep me, though all the world deride,
And when at last the fight is won,
God, keep me still unsatisfied.

—*From the Butterfly.*

Neurasthenia: Its Relation to Drug and Liquor Habits

By FRANK FENWICK YOUNG, B. S., M. D., Covington, Louisiana
Founder and Physician in Chief of the Fenwick Sanitarium

NEURASTHENIA, or nerve weakness or nerve prostration, which is so prevalent in America today, stands at the top of all functional neuroses; but it is rarely recognized in its early stages and only comes under observation when it has reached such profound degree of nervous instability as to render the sufferer unfit for the ordinary occupations of life. It is a condition in which the nerve- and brain-cells are in a state of pathological fatigue and unable for any length of time to perform their functions with any degree of unison and harmony.

We know that in the physiological fatigue of the brain and the spinal nerve-cells there is shrinkage of the protoplasm and a contraction of the nucleus, and if the degree of fatigue be great the latter sometimes even lose their shape entirely and become irregular in form.

In neurasthenia, we have a continuation of this condition. In other words, it is a normal condition of the nerve-cells in a chronic neurasthenic, and as such we find the brain-cells are incapable of properly receiving impressions, incapable of properly holding or elaborating impressions, and consequently, incapable of properly sending expressions. As a result, ideation and cerebration are relatively inefficient and sometimes totally wrong. If this is the condition of the higher cerebral centers, it is easy to surmise the deplorable state of the lower centers that control the various functions of the body. They have suffered in like manner and are, besides, more or less dependent upon the higher centers for proper performance of their functions.

This is the condition of the brain-cells existing in profoundly neurasthenic brains. Unfortunately, and only too truly, neurasthenia exists in various degrees; it usually requires quite a length of time for the cells to reach that profound degree of exhaustion just described.

Understanding the process by which this condition is brought about, it can readily be seen why it requires the length of time it does to develop. Every normal individual with a normal brain and nervous system has systematically during his previous life-experiences accumulated a certain amount of nerve-energy, a surplus amount of which has been stored away in certain portions of the brain, and this is termed the "normal reserve." The purpose of this reserve that nature, in its perfection, has seen fit to supply is manifold.

The brain nourishes and manufactures nerve-force, or nerve-energy, during sleep *only*, and in persons leading a regular life that amount is usually sufficient to meet the demands of the ordinary day's routine. It converts[1] nerve-energy continually during the working-hours, consequently there is a certain amount of nerve-energy manufactured as well as converted during every twenty-four hours.

Now, then, there always exists a certain ratio between the daily amount produced and the daily amount converted or transformed. In times of excessive brain-work, great sorrow or shock, or of any severe strain where there is naturally a greater conversion than the amount produced, it is the purpose of the "normal reserve" at once to supply this deficiency and for cerebration and ideation to go on to a successful conclusion without any interruption or exhaustion whatever.

It is clear, if the ratio between the daily production and daily conversion is entirely lost and the latter as a daily routine exceeds the former, that sooner or later the "normal reserve" will be entirely exhausted, becoming a thing of the past and no longer to be reckoned with. When this happens, we have the daily conversion far in excess of production, with no reserve whatever to supply the deficiency. Then, as a result, what have you? Why, inevitably a daily cellular exhaustion, with an arrest or greatly deficient ideation and cerebration, with resultant instability and failure. In other words, the entire mass of cerebral cells goes to pieces in a vain and fruitless endeavor to continue functioning.

Picture to yourself this condition and apply it to such cases as you have seen time and time again. Could anything be more

[1] Energy is never lost or consumed, but always converted into a something else, in other words, energy always produces

clear? The individual feels the exhaustion, is more or less cognizant of the cerebral weakness, the nervous unrest, the morbid fears, the nervous instability, with the long chain of symptoms. Surely, this is a familiar picture to many physicians.

The lack of power of concentration is one of the earliest symptoms of neurasthenia. The extreme fatigue, out of all proportion to the amount of exertion, is also another early symptom. The receptiveness and unrest of the nervous system, coupled with the irritability and lack of confidence, occur as later manifestations.

What Causes Nerve Exhaustion?

As to the causes of this condition, they are very evident: the conversion of a greater amount of nerve-energy than normal, and the failure of a production of an equal amount, with a final overdraft of the "normal reserve."

I maintain that no legitimate or fair amount of excessive brain-work will alone bring about that condition. No matter how severe or arduous it may seem, the brain is capable of a great and vast amount of work and fatigue, this is almost limitless, provided there is sufficient sleep and rest, including distraction, to allow replenishment and recuperation. Under these conditions, I say, no amount of work can break down or exhaust a normal and hardy nervous system.

Twelve or fourteen hours of severe and arduous brain-work, in connection with eight or ten hours of good, normal, refreshing sleep and rest, is fully compatible with a strong, vigorous and perfectly stable nervous system. No amount of work under these conditions can wreck it. I may differ with others in this view, but I believe I am correct.

On the other hand, take twelve or fourteen hours of hard and arduous brain-work, and, instead of the appropriate amount of restful sleep and recreation, let the greater part of that time be taken up in excesses of any kind, and the nerve-cells will be deprived of that amount of rest and recuperation that is essential; and time soon will tell the tale, for a breakdown and exhaustion of the centers is sure to follow.

Neurasthenic heredity plays an important part in the production of neurasthenia. The children of neurotic parents, the children of alcoholic or drug-addicted parents nearly all inherit weakened nervous systems. This state, however, when recognized, can be corrected by a systematic hardening through certain methods in handling the growing child. But if, as ordinarily in the majority of children of such parentage, this is not done and they grow up to maturity with their inherited weakness, then what is the result? In their very first struggle in life, they go down to exhaustion and defeat and join the vast army of neurasthenics as a "monument to their ancestors." The percentage of those who are scientifically treated and restored to their former condition of usefulness and health is very small, indeed, and this because either not being properly recognized or treated.

Unfortunately, few physicians, indeed, recognize neurasthenia in all its stages, and fewer are they that treat it scientifically and persistently and obtain anything like the desired results.

Many men today whom I can point out as failures in the world, men who have all the necessary qualities of training and education, and all else that goes to make successful men, but, nevertheless, who are failures and never attain the position which their qualities entitle them to, are so for the sole and simple reason that they are neurotics or neurasthenics. They seem incapable of concentration and stability necessary to success.

The Role of Alcohol and Narcotics

Neurasthenia is a direct cause of alcoholism as well as of the various drug addictions. The nervous unrest and the nervous teasings that continually haunt the individual who is a profound sufferer of neurasthenia, that condition of the exhaustion of the whole cerebral cellular mass, call for relief, but the vast majority seek relief of their own accord, and during their greatest suffering of nerve teasing and unrest they seek a stimulant of some kind, usually some form of alcohol.

What is the result? The temporary stimulation does bring them relief; and so they go on seeking continuous stimulation, not, indeed, because they want it, not because they desire it, but because they crave relief from a something that they cannot explain—something there is that worries them. In other words, these sufferers seek relief from their tormenting nerve teasings or nerve unrest, the result of the exhaustion of the brain-cells. Thus they go on seeking by this artificial means the fugitive relief until at last they become addicted to whatever stimulant they have chosen, be it liquor or some drug.

Does this expedient furnish renewed energy for the exhausted cells to carry on their work? Does it take the place of the "normal reserve"? Not at all! It does neither. The narcotic, of whatever form, only ob-

tunds the higher centers of consciousness and reason to the real condition that exists. The exhausted cells are the same as before, or even worse, and the highest centers, which have become very sensitive under the strain, are obtunded or are no longer cognizant of the weakness and exhaustion that exists. Then the individual reasons conclusively that he is relieved, when, as a matter of fact, it is not relief at all; it is only obliviousness of the existing condition. Still, to the victim oblivion means relief.

How clearly, then, is seen the pathway from neurasthenia to addiction of some kind. And I boldly say that by far the largest percentage of the many and various addictions reach that sphere through the neurasthenia-route.

Curative Efforts

In curing these victims of addiction, you nearly always have the original neurasthenia that leads to the addiction to overcome at the same time that you are seeking to combat that also which is due to and the result of the addiction. In other words, you have to meet a double condition in your patient.

The treatment and successful management of these victims by no means is an easy task. The first essential is absolute and perfect knowledge of the disease. Any physician who looks upon neurasthenia as a lack of "will-power" or as "akin" to hysteria, because of its functional disorder, should not attempt to treat neurasthenic individuals. This should be left to the men who *know* and understand thoroughly and appreciate the exhaustion that exists in the cells of the nervous system.

To reestablish the daily ratio of the proper amount of nerve-energy, to meet the demand of ordinary circumstances, and in time to replenish, in part or in full, the original "normal reserve," should be our aim in treating every case of neurasthenia. But, to reestablish these conditions anew, to give back to that individual that perfect self-control and poise and absolute stability that have deserted him, I say, is no easy task. And on the part of the physician it requires time, patience and a knowledge that comes only with the experience of handling these cases.

The more specialized the tissue, the slower it is to repair. Consequently, in building up and repairing exhausted brain-cells, the length of time required is only in keeping with a well-known physiological law. I believe that there are more neurasthenics who go *untreated* in America than those afflicted with any other disease; and it is time that the medical profession give this condition more of their time and study and become better prepared to handle that vast army of neurasthenics, as they should be, by proper and scientific methods.

The Sanitarium the Only Place

The proper handling and treating of these cases belong to sanitariums, as proper institutional treatment is the only one that gives results. Hypochondriasis, so often seen, is always due to neurasthenia. Each of you can see a number of such cases you tried hard to benefit, but from whom you got absolutely no results. You became desperate, the patient likewise. Not your fault; for the best doctors in the world could not handle these cases satisfactorily at their homes. These patients belong properly to sanitariums, and they should be sent there as quickly as possible prior to their becoming addicts of some kind, which will almost surely happen. Therefore, we find neurasthenia and drug- and liquor-addictions closely allied.

Up till now, where have the patients gone for treatment—for they will surely seek it? They have been the prey and rich harvest of quacks, whose "ads" many of the socalled strictly ethical journals carry—places that have no resemblance to a sanitarium and are nothing more nor less than common boarding-houses, where everybody is treated alike; true "merry-go-rounds."

Here, I may refer my readers to *Collier's* of September 22, 1906, for a good exposure of these sharks, and, also, to the *Critic and Guide*. These two publications deserve much commendation for their good work in exposing such frauds, and the medical profession owes it to them. Few journals, indeed, have done anything to throw the searchlight on these numerous charlatans.

Who is responsible for these unfortunate victims having gone to the human sharks? Why, the legitimate medical profession is solely responsible! Many physicians know almost nothing about neurasthenia and its vast chain of symptoms, much less of drug- or liquor-addictions, and when they do, they cannot cure them at their homes; or, even if they do know, they take no interest in advising them where to go. Hence, these people are left to their own selection, and the glowing glib-tounged promises from fakers catch them.

My Own System of Treatment

The treatment to be any way satisfactory in these cases as stated, must be institutional.

The means which I employ are: (1) Drug medication. (2) Electrotherapy. (3) Hydrotherapy. (4) Mechanotherapy. (5) Psychotherapy.

Regarding the first, I will say, that there are only a few drugs that can be employed intelligently and with satisfaction. I saw an article, written sometime ago by a physician, claiming to have a sanitarium, who gave as the most valuable drug in the handling of neurasthenics phosphate of codeine. This drug and all of its family should not be used under any circumstances. And I will state that during my experience, extending over a period of sixteen years with these special cases, during which time I have handled hundreds, I have been particularly careful to use nothing akin to this drug-group, for all neurasthenics will take to any form of opium like a duck to water.

A few words here regarding the "great three-days hyoscine cure" is not amiss. For ten years I used it and studied its effects upon unfortunates coming under this head—upon well persons and upon lower animals, and am thoroughly convinced it has no place, or only a very slight one, in the armamentarium of specialists handling drug- and liquor-patients. Dozens are being killed each year by this "hyoscine treatment," and others are ruined for life. Quite well do I agree with Dr. Shoemaker, the great author and therapeutist of Philadelphia, that when a person is once intoxicated with hyoscine it requires years for the nervous system to get over the shock, if he ever does.

The article written by Dr. Lambert, of New York, vaunting the Townsend "gunshot combination or prescription" method, was not based upon a sufficient number of cases with observation sufficient long after the socalled cure to warrant serious consideration by the profession. Yet, this article was copied broadcast by so many medical journals. Why? All serious-thinking and truly competent and scientific physicians in this line of work know there was nothing of weight or merit, much less new, in the Lambert article. All drug and liquor cases should be under observation for at least four or five years after treatment before any responsible report can be given on them. Whatever drug is being used, let it be the active principle, if possible, for these are the most reliable. Dr. Patterson's article on "Don'ts" in CLINICAL MEDICINE was good and to the point.

Under the second heading comes electrotherapy; the divisions of which are static electricity, the electric-light cabinet, and the sinusoidal and galvanic electric baths, all of which aid us considerably.

Under the third heading comes hydrotherapy, one of the most valuable assets and includes the vapor, shower, douche, neutral, saline, and various other baths; any of which when needed and properly used gives admirable results.

The fourth, which is serviceable is mechanotherapy. From this branch we have physical culture in its various forms; in other, words a complete and modern gymnasium in the hands of a well-instructed master of this art. When this is done, the benefit to all neurasthenics is incalculable.

The fifth, and by no means the least, is mental or psychotherapy; by which we mean suggestive therapeutics. Under this caption come the various forms and methods of verbal proposals, instructions, advice and rules which when used by the experienced neurologist yield flattering results.

In conclusion, I will say, that all drug- and liquor-addicts, when they enter an institution, are neurasthenics, as has already been proven in this article, and the first step in the treatment of this class is to free them from stimulant, be it drug or be it liquor, whichever the unfortunate is using. (Some enter institutions taking as much as 180 grains of morphine and 120 grains of cocaine; others as much as one-half to one gallon of whisky in twenty-four hours.) This is easily done in from three to sixteen days, with little inconvenience to the patient, without danger or shock, and virtually without any suffering whatever, when they are in the hands of one who knows his work.

After the patient is freed from the addiction, the regular institutional treatment is essential, which, when properly carried out, always accomplishes the end; otherwise they are sent home neurasthenics still and will inevitably return to drug or liquor. The results obtained in from four to ten weeks are almost incredible—must be seen to be realized.

Therefore let it be distinctly understood that when a patient is off of drugs or liquor he by no means is cured; he is only put in the proper condition for a cure. In other words, then, the neurasthenia, the cause of all the trouble, is there, and it is up to the physician to cure the patient of this; and in every instance it can be done, unless you have some unfortunate degenerate, which is rare. I am firmly convinced that all cases of neurasthenia, if properly handled, are curable, unless they are of the above-named type.

Some Accuracies of Practice

The Correlation of Some Precise Methods of Diagnosis and Treatment

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EDITORIAL NOTE.—At our suggestion, Dr. Williams has supplemented the articles which he has written upon diagnosis, and which have appeared from time to time in these pages, with a series telling how to make therapeutic application of that diagnostic knowledge. For instance, if too much urine is excreted, you not only want to know the "why," but, also, "what shall be done?" If there is too little urea, you want someone to explain what to do to set matters right. Dr. Williams is giving us this help—and, frankly, the professional staff of CLINICAL MEDICINE *will try to help him. This series of articles is unique, and, we think, will prove very helpful.*

DR. HARVEY WILEY is telling us how to raise our babies; Mrs. Rorer is rapidly solving problems in physiology that have baffled the research-workers for centuries; Mister Pitcairn has straightened up the vaccination-question, showing up Jenner as a simpleton; Caruso is instructing our daughters in what they shall wear; Ella Wheeler Wilcox, onceuponatime writerine *cum laudibus*, has shamed the surgeon. The professional man has been defined as one who must know something about everything and everything about something. Lo, here! Hearken to another of the profesh—Williams is to write concerning therapeutics!

Diagnosis and therapeutics are closely associated. He who practices medicine, even though he limit this practice to diagnosis, must specialize in therapeutics. While he may not actually prescribe or dispense, he ever must keep in mind the practical diagnosis, which, after all, is the diagnosis suggesting precise therapeutic measures.

The disease is sciatica; but why exhibit salicylates (specific), when the urine is full of pus? The patient complains of headache; but why confine the treatment to the coal-tar series (symptomatic), when the sputum contains tubercle bacilli?

The therapeutic hints which I am about to record are not only those accepted today by our leading practitioners as best, but those which, in many instances, I have seen tested—usually by colleagues—following the information supplied by the chemical, microscopical, or bacteriological aids. Long ago, when I limited my practice to diagnostic work, it came to me that I must practice therapeutics with a vengeance.

This series of papers has been written for you, the enthusiastic practitioner, not for the therapeutic nihilist. His is the disposition to scoff from chairs of ease; yours, the duty and the privilege of saving the life of your patient. Let us dispose of the pseudo-scientific grandstander as did Elisha Bartlett many years ago: "When crowds of epauletted and bedizened coxcombs who have never smelt gunpowder make the air clamorous with their noisy boastings, the war-worn and scar-covered veteran may, at least, point to the trophies that he has brought from a hundred battlefields."

A destructive policy will always fail. A constructive campaign may be based upon wrong premises, and may, apparently, fail; but will lead to better things in a nearer future. And, so, we are exploring a new Cathay. Many of the paths, though of gold, are not yet trampled smooth. Tomorrow will witness perfection; but meanwhile let us look about us.

Several years ago I suggested that the truly valuable uranalyses are not those designed to discover casts, blood, and pus, those which diagnosticate disease often in its incurable stage; but for the minor products of abnormal metabolism and excretion—proof of disturbed function and its nature in certain organs and systems while remedial measures may yet avail.

The Quantity of Urine Voided—Polyuria

Passed is the day when physicians approach the analysis of a single voiding of urine, expecting to find considerable information that may be of value. It is worse than useless to attempt quantitative examinations when the 24-hours' amount is unknown; but of this I shall have something to say later. The amount of urine voided daily, irrespective of other findings, is not without a thera-

peutic significance. No comment is necessary concerning the many influences that may affect the urinary output; and this especially applies to the temporary variations. However, persistent polyurias and oligurias demand attention.

Some Causes of Polyuria

A polyuria, when marked and persistent, can not always be dismissed as a condition of no importance. Especially is this true when the polyuria becomes also a nocturia, that is, when the condition is more marked during the night. Such a finding very often directs the attention to the heart, and the practitioner should not be surprised to find some enlargement indicative of compensatory hypertrophy, but especially of dilatation. Whether the cardiac insufficiency obviously present exists as a primary (valvular) condition or merely as a result of arterial hypertension, is, of course, to be determined in the case at hand and indications accordingly met with digitalin or glonoin, respectively, or even with other agents designed eventually to help out this overworked organ.

I shall show later that in some forms of cardiac insufficiency there may be a decrease of urine. The lesson to be emphasized is: *Persistent polyuria or oliguria should invariably direct attention to the heart as one of the possible causes.* Several times in my work attention has been drawn to hypertension by polyuria when the advisability of blood-pressure determinations had not yet been suggested.

It may be remarked that frequently polyuria does not require direct treatment; for polyuria, even though persistent, may arise from so many causes working in various combinations that often we have no good reason to believe that it is strictly pathological, but, like certain other symptoms, may be regarded as one of our body defenses.

The paroxysmal polyurias as a rule are of vasomotor origin, and are more likely to indicate functional than organic brain or cord lesions. We may frankly confess that many times we are at a loss to interpret the meaning of all these paroxysmal polyurias. Nevertheless, they may of themselves become exceedingly annoying to the patient; in which contingency they generally may be relieved by the administration of the valerates with ergotoid—of the latter, 30 minims by mouth, three to five times a day for short periods.

Diabetes mellitus supplies our most vexing cases of polyuria. And, yet, if we can but reduce the glucose in the urine, invariably the total daily urine is reduced; and, so, the polyuria cannot well be treated without "going after" the sugar.

Diabetes insipidus, a disease concerning which much has been written, but of which few cases are seen (at least this is my experience), demands treatment aimed at the polyuria. Such treatment usually fails. I have seen a suggestion in the recent literature, and this I am repeating.

It has become very much of a fad to find a Wassermann reaction in almost every disease for which a cause has not been previously proven. Thus, Neuberg has obtained a positive reaction in a case of Banti's disease, and suggests a syphilitic origin for some of these cases. Another man has found the Wassermann reaction in scarlatinal nephritis, and concludes that hereditary syphilis certainly is necessary for this complication to ensue. There are plenty of other similar instances.

But now Benario reports the finding of a positive Wassermann reaction in seven cases of diabetes insipidus, and suggests cerebral syphilis as a cause. He, furthermore, claims cure of certain of these subjects under specific treatment. I am inclined, however, to call attention to the frequency of syphilitic nephritis associated with polyuria, and am not willing to accept Benario's deductions without question. We have found that syphilitic nephritis by no means is an uncommon condition. Anyhow, do not forget protoiodide of mercury and arsenous iodide in the baffling polyurias.

Strauss has assumed that true diabetes insipidus is not a very serious condition, after all, and seemingly suggests that much may be done by training the patient to drink less water. I have found that 24-hour calculations, in several of these cases of diabetes insipidus, revealed, not a true polyuria, but, rather, frequent voidings of urine in irritable bladder. Treatment of this would lead us into a study of symptomatics.

Entirely foreign to the intention of this article is the question of test-polyuria, where large amounts of water are administered experimentally, in order to test the ability of the renal parenchyma to pass it on as urine.

Oliguria, or Scanty Urination

Persistent oliguria may usually be regarded as a very important condition, and especially is this true where the urinary solids are high or normal. It is not unreasonable to suppose that serious damage to the kidneys is likely when the urine is overconcentrated.

The diagnosis of persistent oliguria will rest upon many factors, but it seems to me that the voiding of anything below 22 fluid ounces daily (in some instances more than this) should be regarded as a case of oliguria. When day after day the amount of urine rarely exceeds 24 ounces, we have good reason to assume that it is too concentrated. The cause may be evident (fever, diarrhea, etc.); but ordinarily we shall find it just as necessary to treat the oliguria as to treat the cause of it.

Treatment of Oliguria

Drinking much water may, sometimes, aid. But, do not say to the patient, "Drink plenty of water," for very often after such advice the water will suddenly become offensive to the patient and, for some unknown reason, may drink less than if left uninstructed. It is much better to exhibit medicines in large amounts of water at frequent intervals; and in this manner water prescribing is truly realized.

Under certain circumstances, small doses of diuretin given along with the water will aid in flushing out the kidneys. In desperate cases, salines introduced by rectum appear to aid. I use the term "desperate" advisedly: a pint of urine of 1042 specific gravity passed each twenty-four hours, day after day, may be regarded as a circumstance quite as serious as a hemoptysis or a Dietl's crisis—less startling, to be sure, but more likely to be death-dealing eventually.

In other communications, I have shown how by persistent urinary concentration painful oxaluria may result; and I shall have more to say concerning the treatment of this condition further on.

Shall we undertake to treat the oliguria associated with certain of the nephritides, especially those of the epithelial type? I do not know. Our knowledge in respect to this is not yet perfect. Is it better to overcome the concentrated urine, or to place a greater strain upon the kidneys by inciting them to secrete more water? In an existing nephritis water usually is given, but I believe that better results are secured when we combine with this treatment a call for aid upon the other emunctories, besides the kidney.

Even as polyuria many times is associated with cardiac insufficiency, so also may oliguria be present in distressed heart. These are invariably the cases associated with a low arterial tension, so that, when the cardiac area and signs are suggestive, treatment should be directed especially at the heart musculature. Give digitalin.

Another remedy that undoubtedly is of great value in these cases of scanty urination is sparteine sulphate, which is a gentle and almost nontoxic cardiac tonic and a potent diuretic. By adults, from 1-2 to 1 grain may be taken every two or three hours; children in proportion.

Closely associated are the liver-cases wherein urobilinogenuria, sometimes even albuminuria is associated. Here the urinary output is persistently low and cannot always be explained by an ascites collecting but may mean at least hindrance to return of blood through the liver to the right heart (venous hypertension and consequent renal engorgement). Almost invariably there is an oliguria associated with urobilinogenuria.

Anuria, or complete absence of urine, for several days is always a condition of considerable importance, notwithstanding the contradictory statements in many texts. That anuria may persist for a considerable period without uremia, I will not gainsay, for we all have witnessed this condition; but how unexpectedly convulsions and fatal coma may suddenly appear, can be realized only by one who has seen such an occurrence. The kidney has for its purpose the secretion of urine; let this purpose be thwarted, and the condition may at any time quickly pass beyond the action of remedial measures.

Let me repeat; anuria always is a serious occurrence. Even though the patient jokes with you and laughs at your painstaking; even though the texts tell you that Dr. So-and-So reported a case where the patient recovered after a two weeks' anuria, do not fail to resort to the use of hot-packs, pilocarpine and elaterin.

It has been claimed that anuria cannot be held responsible for the symptoms of uremia.

Perhaps not; but of the nature of uremia we know very little, and clinical experience teaches me that the conditions are very closely associated. Do not underrate anuria.

Physical Qualities of the Urine

Appearance.—I shall not spend much time upon the macroscopic appearance of the urine—appearances are deceiving. Better subject the specimen to thorough chemical and microscopic tests before initiating treatment. Much time could be devoted to a description of the appearance of the urine; but for our purposes it is well (and certainly safer) to proceed to other considerations.

A dying man may pass urine that appears entirely normal, while a person in excellent

health may void an "awful looking mess" (amorphous urates). The physician should acquaint himself with the macroscopic appearances of the urine, as given in standard texts; but must place little emphasis upon them.

Cloudy urine must be filtered before applying the chemical tests; neglect to do this has led to many false conclusions.

A little piece of paper,
A funnel made of glass
Will hold back all the crystals
And let the liquid pass.

Color.—A word about the color may not be amiss. Naturally enough, when we are dealing with normal urinary pigments, the color varies directly with the concentration. Thus, I have come to express the color as: colorless, brassy, and copper. And this answers very well for ordinary practical purposes.

When pathological colorations are absent, we may form a fairly good idea as to the concentration and, indeed, as to the 24-hour amount by observing the color; although this is not satsifactory in the question of exact calculations of solid constituents. When speaking of urochrome and urobilinogen, I shall have something further to say concerning the normal urinary pigments.

Black urine is said to indicate some melanotic neoplasm, but this is not so in routine work. Usually a black coloration either in the fresh urine or later in the standing sample, will be found owing to an alkaptonuria or to the excretion of other aromatic derivatives, either medicaments or broken-down proteids. No special treatment is demanded so far as the condition itself is concerned. The problem is, to get at the cause.

The green and golden urines of bilirubinuria will be considered later.

The red urine may mean a deeply copper-colored urine (concentration or increase of normal pigments), or may mean blood, uric acid, and other things, the question to be decided by chemistry or microscopy.

The methylene-blue urines demand no special elucidation.

Odor.—Therapeutic agents are quite likely to cause a urinary odor; but "smells from the urinal" rarely give us a tip as to what therapeutic agents to employ. Indeed, we are justified in adding to a urine to be mailed, for examination, thymol, camphor, and chloroform, and various aromatic bodies, without fear of subtracting from the value of the examination.

If a freshly voided urine is strongly ammoniacal, alkaline cystitis probably should be diagnosed. We do not treat the odor, but rather the causes and other accompaniments, the agents being, for instance, hexamethylenamin, diacid sodium phosphate or other urinary acidifier, and proper surgical treatment, such as irrigations.

A sweet odor suggests glucose, and especially acetone. Test for them and treat accordingly.

A fecal odor does not always indicate colicystitis or colipyelitis, but it should suggest this diagnosis. A fecal odor may mean fecal fistula. It may mean the presence of a secondary cystitis (stone or tumor) where hydrogen sulphide is released by germs.

The Chemical Reaction of Urine

As a rule, I shall not detail the technic of using the various tests. To this part of laboratory work I have devoted a book, so that a repetition scarcely is called for. Neither can this series delve deeply into the problems of physiological and pathological chemistry. Certain of the more recently devised tests will be detailed, and a few remarks made here and there regarding the principles underlying the various tests, so that the practitioner may comprehend just why a certain line of treatment is advised.

Normal urinary acidity does not arise from the presence of free acids, but from certain acid salts, especially diacid sodium phosphate. The mixed 24-hour specimen of urine normally is acid. Folin seems to have shown that free organic acids, in traces, may contribute to the urinary acidity even in health; but for practical purposes these may be ignored. So much for the normal acidity of the urine.

We constantly see the statement that normal urine sometimes is alkaline; and actual tests with litmus seem to bear out this statement. However, most workers have discarded the use of litmus as an indicator, and employ instead an alcoholic solution of phenolphthalein. Experience has shown me that when using this reagent practically all strictly normal urines exhibit an acid reaction (24-hour specimens being utilized.)

Many influences contribute to urinary hyperacidity; but these may be classified under one general head, "erroneous metabolism," either of the body cells, or secondary, by virtue of the presence of certain microbes. Thus, we have the true acidemia of Harrower, in which the acids are produced in the bowel by excessive and faulty putrefaction of pro-

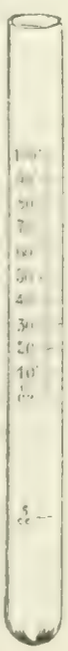
teid foodstuffs through the action of certain bacteria (intestinal intoxication). In a like manner, I have, upon several occasions, called attention to an acidemia where the body-proteins were broken down in a similar manner, and in consequence the urinary acidity may be increased in such conditions as pus formation, malignant neoplasms, and so on.

Then there are the acidoses of sugar-diabetes and of other conditions where carbohydrate starvation exists, and concerning which we shall have more to say under acetone and its congeners. Certain local infections of the urinary tract, notably those owing to the colon and tubercle bacilli, may cause hyperacid urines (scalding urines). Finally, we have now and then to deal with unknown causes of increased urinary acidity, those obviously metabolic in character, but an exact classification of which is elusive. Thus, certain of the oxalurias and uricacidurias (uric acid does not, of itself, contribute to the acidity) fall into this class and will be considered in another communication.

Acidity of the Urine

When casting about for a method of estimating the urinary acidity, our attention is directed first to the titration method of Folin; which is the most accurate of all, inasmuch as the use of potassium oxalate prevents dissociation of the ammonium compounds. However, for practical purposes, this need not be considered an advantage, but rather is an objection, inasmuch as the very presence of these ammonium compounds shows us that much of the acid elaborated in faulty metabolism is thus hidden, and it is this very acid for which we wish to test.

So it is that I regard the method of Harrower, while open to objections, to be preferable and certainly much more simple; and this is the one which will be described here.



The method using this special instrument is, as explained by Dr. Harrower himself, as follows:

"The acidimeter which I have designed consists of a glass tube so graduated that 10 Cc. is the first measureing point. From this upward the tube is graduated in fifths of a degree to 100°, each degree representing the amount of decinormal sodium hydroxide solution required to neutralize 100 Cc. of urine. The method of using the acidimeter is as follows:

"The urine to be tested is poured into the tube until the lower edge of the meniscus is just on the 10-Cc. mark. Two drops of phenolphthalein indicator solution are added, and then, with an ordinary medicine dropper, decinormal sodium-hydroxide solution is slowly added, inverting the tube after each addition, until the color of the fluid has just been changed from a yellow to a light-rose pink. The acidity in degrees is now read off on the tube at the level of the fluid. The normal urinary acidity of a mixed 24-hour specimen should be between 30 and 40 degrees." Total acidity 35,000 to 45,000 units.

Since the urinary acidity varies from hour to hour during the day, an estimation, to be of value, must be made from a sample taken from a mixed 24-hour specimen. One other caution is necessary; namely, the estimation must be made as quickly as possible, else errors will result because of the acid or alkaline fermentations occurring in the urinal. A non-acid preservative (chloroform or xylene) always should be added to the vessel in which the urine is collected.

Copremic Acidemia

Let us turn our attention briefly to the acidemia of copremia. In certain persons, as a result of constipation, the excessive ingestion of proteids, enteroptosis or of various other causes, certain bacteria in the colon attack the proteid foodstuffs, breaking them up into organic acids and other decomposition-products, and these are absorbed and appear, at least in part, in the urine. We do not know the composition of all of these substances. One of them is indolacetic acid; certain ones of them are acids containing sulphur (in some cases, sulphuric acid?). In certain bacterial decompositions of proteids, hydrocyanic acid has been detected; and it is not unreasonable to suppose that such may occur in traces here. Certain of these substances are the true indicans..

But it is known that these bodies are poisonous; and it has been assumed that their presence may explain the headache, vertigo, blues, and other nervous symptoms associated with copremia. Furthermore, it is fairly evident that during the elimination of these acids the renal parenchyma may suffer injury; and thus it is not unusual to find in such a urine traces of albumin and hyaline casts. The ammonia of such a urine may be increased at the expense of the urea, because the alkaline precursors have united in part with these poisonous acids, that the fixed alkalis of the tissues may be spared. In such contingency, the total nitrogen may

be unaltered but the urea low, findings similar to those of true acidosis of carbohydrate starvation.

This, in brief, is the picture in the acidemia of copremia.

Now, before proceeding to the consideration of the other causes for hyperacid urine, let us look into the treatment of this condition that is so important in the everyday practice of most of us.

There is an old caution, "Examine the urine in every case of persistent headache;" but reference was meant, of course, to the possibility of the existence of nephritis. Now we follow the same advice, but we also look into the question of acidity.

The man who hopes to treat intestinal acidemia by a course of alkalis alone will occupy a position similar to that of the boy who tried to drink up the water from the leaking dam. The man who hopes to accomplish noteworthy results by the administration of a single cathartic will be but little better off. Both of these methods are not without value, but there are other principles which must be carried out if any degree of success is expected.

As a whole, the treatment of copremic acidemia may be expressed categorically as follows:

1. Reduction of the proteid diet
2. Eliminating the focus of the intoxication.
3. Administration of antacids.

Obviously, the main problem will lie in eliminating the focus of infection. But how?

A preliminary cathartic is necessary; and, since we are dealing with the colon, this, obviously must be a saline. Then must follow a course of laxative treatment (alkaline salines), to insure a strict house-cleaning in this natural incubator. This may be coupled with the proper use of intestinal antiseptics. We know that intestinal antiseptics will not murder every erring germ; neither do we expect such a result. Even Lister did not hope to eliminate every single microbe when he proposed surgical asepsis. Nevertheless, we can do much in this direction.

What next? Now let us cease giving the antiseptics, but continue the laxative treatment—we are ready to introduce a well-behaved germ. Metchnikoff and others have directed our attention to the bacillus bulgaricus (galactenzyme); and this, it may be ventured, will act almost as a specific when backed by proper attention to the other principles of treatment.

Of antacids, there is no lack; but one of the best for the treatment of these cases of acidemia, following the intestinal cleaning-out already recommended, is the mixture known as sodoxylin. Very decidedly beneficial results often follow its employment.

Now and then this line of treatment will fail or must be continued indefinitely, excellent though it has proven in the majority of cases. What is the trouble? Examination will reveal that an enteroptosis or other anatomical condition exists favoring stasis; and here we must call upon the surgeon to help us out. But *as a rule* these cases may be successfully handled by medicinal and dietetic treatment alone.

In previous communications, I have insisted that a similar acidemia may exist by virtue of necrotic changes in the tissues. The findings in the urine are similar to those detailed above. The breaking up of body-fats may add the fatty acids; still, the picture is not unlike that seen in the colonic acidemia. The blood examination may reveal an iodophilia (to be considered in a later chapter). Thus, in necrotic tumors, abscesses, pulmonary tuberculosis, and so on, we may have a true excretion of poisonous proteid-decomposition-products by way of the urine.

At times we may wonder why proper attention to the colon does not clear up an acidemia. Billings and others have shown that hidden suppurative processes, though of a low grade, may lead to nephritis and arthritis, and they have directed our attention to the tonsils and other anatomical regions. And thus to an antacid treatment should be added the use of proper bacterins or even operative interference.

The question is a big one. I have expressed my belief, in other articles, that a man may have the toothache in the big toe; and that I have seen instances in which the removal of a decaying tooth or the proper draining of a frontal sinus was followed by a return of the urine to normal acidity and simultaneous disappearance of headache and dyspepsia.

The diagnostician often will be perplexed by the occurrence of highly acid urine and indicanuria, *but let him keep in mind that such conditions always are pathological.*

As to Acidosis

Quite different in nature from acidemia, is *acidosis.* We do not understand this condition quite as well as we should like to; yet, it

seems at this time certain principles may be laid down.

In diabetes mellitus, as the patient grows worse, we shall find his urine increasing in acidity and his blood decreasing in alkalinity. We shall find the urea low; and this usually may be traced to an increased ammonia (precursor), the attempt being made by nature to neutralize the acids, so that the fixed alkalis of the tissues may be spared.

What are these acids and acid-like bodies? Betaoxybutyric acid and diacetic acid may be given places of honor: perhaps there are others. Closely associated, we may find acetone. In fact, acetone has been charged with a share in postanesthetic vomiting, vomiting of appendicitis (including all injuries to the peritoneum); and I have found acetone in the vomiting of pregnancy. Does it occur in tuberculosis and other diseases?

In diabetes we have to treat the glucosuria as well as to administer antacids, and so on. It has been suggested by Frew that acetonuria associated with postanesthetic vomiting is caused by carbohydrate starvation, and that it can be relieved but not prevented by the use of alkalis.

Guthrie has advocated the administration of nutrient enemata up to within two hours of the operation. Frew suggests that these should contain available carbohydrates, best dextrose, that its absorption and assimilation may be rapid. (Do not confuse with the treatment of glucosuria or hyperglycemia, which will be detailed later. The principles are much different. In the former, carbohydrate starvation arises from dietetic errors, and the tissues are willing to use the simple sugars. Forced to fall back upon proteids instead, acetonuria results. But in diabetes the tissues cannot use the sugars, even though these be supplied in the simple forms.)

Hyperacidity Owing to Colon and Tuberculosis Germs

Next we have to deal with hyperacidity of the urine resulting from the presence of the tubercle and colon germs. There is a temptation to dismiss this condition with a recommendation that treatment be directed to the causative microorganisms; and this may suffice in part in the case of the colon bacillus, where pus is almost invariably present to aid in the diagnosis. But what of Koch's bacillus?

Hyperacidity of the urine may be present, in a case of tuberculous pyelitis, for many months before pus, albumin, and blood or other pathological products are found. Let us be on the lookout for these cases. These bacilli show a tendency to compensate for any alkaline treatment aimed at their metabolism. Also, remember that hexamethylenamine is most potent as a urinary antiseptic when the urine is acid.

I might venture that the acid urines of the colon and tubercle infections are, of all, the most difficult to neutralize; and this should be regarded as a point of weight in the diagnosis. Very large doses of alkalis must be given, as much as a dozen Grams of potassium citrate daily to a child of two having colon pyelitis, according to some authorities. Yet, this treatment will be best in the long run; for the colon bacillus can compensate only to a certain point, and then, forced to live in an alkaline medium, will quickly perish. Perhaps we could accomplish more in renal phthisis were we to push alkalis, frequently testing the urine, to be certain that we were accomplishing what we had set about to do.

Finally, perverted metabolism may supply hyperacid urines which elude classification. The urines of the socalled uricacidemias and of the clinical oxalurias are very often excessively acid; but of this we shall have more to say under uric and oxalic acids.

Unclassified Metabolic Perversions

I have stated that the normal urine (24-hour mixed specimen, examined when fresh) rarely is alkaline, as tested with phenolphthalein. A persistently alkaline urine (properly tested) may usually be regarded as a pathological condition.

First of all we may well consider alkaline cystitis and its treatment so far as the alkalinity is concerned. This being caused by fermentation, which in turn comes from conditions principally surgical, treatment must be surgical. But certain cases, for various reasons, cannot be operated, and there are medical indications bound to rise. One of these, hyperalkalinity, favors precipitation of salts and the consequent formation of calcareous deposits and perhaps other complications.

I have advised the use of benzoic acid, in the past, when dealing with these conditions and have seen fairly good results at times. But recall that the *normal urinary acidity is not owing to free acids*, but to certain acid salts, notably diacid sodium phosphate. advising the use of this salt; but have found it difficult to secure from pharmaceutical And, so, in some of these cases I have been houses. I have seen excellent results in one

patient, a few grains apparently relieving ammoniacal strangury.

I am confident that the administration of that substance, providing the normal urinary acidity, will eventually prove of most value, being, as it is, the only rational method of treating hyperalkalinity. [Jordan, in *The British Medical Journal*, finds both the benzoates and acid sodium phosphate of value to acidulate alkaline urine.—Ed.]

An ammoniacal alkalinity is a volatile alkalinity; i. e. the urine upon standing if the fermentation be retarded, loses its alkalinity, the ammonia escaping. A volatile alkalinity is invariably persistent. A fixed alkalinity is more likely to be temporary and represents an increased excretion of fixed alkalies from some exudate or extravasation being absorbed or when alkalies are being administered as medicaments. Such urine, while not strictly normal to the routine of the cell community, cannot be regarded as pathological of itself and demands no therapeutic consideration, although, continued to excess, it may lead to calcareous deposits.

In the hypochlorhydrias and upon certain diets, examination of a single specimen of urine may lead us to diagnosticate fixed alkalinity; but I should prefer to investigate the 24-hour specimen, since that is quite likely to show an acid reaction.

Specific Gravity and Total Solids

A specific-gravity reading may suggest, but never "cinch," a diagnosis. A very large amount of a day's urine of a tremendously high specific gravity suggests diabetes; but in at least one instance I have seen a diagnosis thus made turn out to be incorrect. In obvious nephritis, a small quantity of urine having high specific gravity suggests epithelial involvement, whereas considerable urine of a low specific gravity suggests implication of the fibrous structure. Here again the 24-hour specimen is to be tested, because the specific gravity varies considerably during the day.

No absolute standard can be fixed for health. The texts have repeated the 1020 figure through the ages, and it hits the truth fairly well when the individual passes about 48 ounces (or 3 pints) of urine daily. But let this person go upon a water spree or a beer debauch, and what happens? In proportion as the total of the urine ascends, so does specific gravity descend; or, the inverse happens if the urine is decreased in amount. Temperature changes operate in a similar way. When a cold wave appears, the 24-hour urine generally can be collected in a quart bottle.

Remember that we have in mind a person in excellent health. In disease, we have many influences coming in, so that I may risk the statement that the specific gravity rarely suggests definite lines of treatment. I have referred to the high specific gravity of concentrated urine and outlined a rational therapeutic procedure.

Of considerably greater importance is the question of total solids. Known the daily urine and its specific gravity, it is quite easy, by means of certain coefficients, to make this determination approximate, at least. Thus if we multiply the last two figures of the specific gravity by 1.1 and in turn mutiply the result by the number of fluid ounces of the urine voided daily, we have the total solids expressed in grains. Of course, this method is not accurate. Still, for that matter, the more complicated methods are not without sources of error; and this simple calculation ordinarily will prove the preferable one. If now we divide the result by 15, the total solids present will be expresses in Grams.

The normal individual upon a mixed diet excretes by the kidney-route something over 60 Grams of solids daily; variations must be almost spectacular to attract much attention upon the part of the diagnostician. Certain it is, however, when the total solids fall below 30 Grams or soar above 75 Grams such readings cannot be regarded as normal. In the first case it is well to remember that urea alone usually runs over 32 Grams, with a diet containing plenty of proteids, while, in the second instance, the kidneys have thrust upon them more work than should be expected of them.

When subsequent calculations of the various salts brings out the fact that all the solids are present in decreased amounts, even though the diet cannot be held to account for an explanation, we must look about us to ascertain, if possible, the cause for this condition.

Sometimes this cause may not be obvious; now and then a general "metabolic sluggishness" may furnish the explanation. In certain instances, diseases of the nervous system seem to play a part. Attention has been called to the very small amount of solids in athyrea; and I have been on the lookout for such conditions. I can recall one case in particular where persistent low solids gave the hint, and small doses of thyroid extract cured a patient who had gone the rounds. Most of the consultants had suggested a neurosis. This taught me a lesson, which was

emphasized somewhat later in a similar case, showing that the diagnosis of athyrea as a rule is missed by the average medical man.

Empirically, eupurpuroid has been recommended for low solids. Another remedy which should be tried more, to increase the content of solids in the urine, is boldine. This alkaloid is especially valuable when the patient's urine contains little urea in association with relatively high total solids.

The total solids may soar high, but usually this may be explained by the increase of but one or several of the urinary constituents. It is up to the practitioner to determine which of these is excessive before planning a treatment.

Dr. William Goodhue: The Lepers' Friend

An Appreciation, by His Brother

By E. S. GOODHUE, M. D., LL. D., Holualoa, Hawaii

FOR more than ten years the subject of this sketch has lived among the lepers of Molokai, giving his best efforts in time, study, and hard professional work for the amelioration of those pitiable, hopeless victims of a foul malady. Coming there when conveniences and equipment were inadequate, Dr. Goodhue has suggested and aided one improvement after another, until at present the colony is better fitted, probably, for its great needs than any other leper-institution in the world. This is saying very much, but the statement cannot be questioned.

Here are the various "homes," in the shape of substantial structures, the hospitals, churches, stores, schools, together with all necessary administration-buildings, besides an ideal operating-hospital for the surgical work done at his biweekly clinics by the surgeon-in-chief. This clinic Dr. Goodhue established several years ago, after having demonstrated that surgery was one of the most valuable of the available measures in the treatment of leprosy; and, in his hand, it has grown to be a feature of the institution.

In an article printed in *The Williamsport* (Pennsylvania) *Grit* for February 7, 1909, we find this statement:

Opinions of Some Famous Men

"Dr. Goodhue has carefully tried all remedial and therapeutic agencies that have come to him with any recommendation, carefully noting and recording results, and has thereby made substantial contributions to medical knowledge . . . . On another phase of the treatment of the disease, Dr. Goodhue's views are thus expressed by himself: 'Leprosy is a surgical disease. That is to say, the various surgical procedures adapted to the relief and cure of pathological lesions constantly and necessarily associated with leprosy are of infinitely more service to the leper in the relief of pain and discomfort, preventing fevers, restoring active use of hands and feet, and prolonging life, thus proving of more real benefit to the leper than all the therapeutic measures of our present-day methods of internal treatment.' "

Dr. Robert Koch, the famous physician and scientist of Germany, who visited this leper-settlement a few years ago, said: "Dr. Goodhue's work here is surprising and extraordinary. I call his one of the great clinics of the world. With unassuming gentleness and modesty he is doing a work not only for Molokai but for the world." These words are not those of an enthusiast, but were uttered by a man of conservative spirit.

Many other distinguished physicians as well as literary men have written of this great work in terms of highest appreciation, but none of all this praise has in the least affected the simple modesty of this physician-philanthropist, who is inherently averse to publicity and who has ever discouraged anything that is not directly concerned with the betterment of his people.

The Lincoln of the Lepers

The late Nicholas Senn, under whose teachings Doctor Goodhue received his surgical training, once referred to this pupil as "the Lincoln of the lepers." And, indeed, this likeness to Abraham Lincoln has been observed and spoken of by others. As a result of this man's unselfish sacrifice of himself, his willingness to meet the wants of any of the lepers day or night, his deep and sympathetic interest in the history of each one under his care, as well as the success he has met with in relieving so many of physical

suffering, all of his people are attached to him with a deep, unfeigned affection. Their love is shown in many ways; and this he appreciates, but always receives it with a characteristic protest.

Once he was asked to accept some policital honor, but he declined, saying, with a smile, "If you make a politician of me, who then will be your doctor?" The matter was never referred to again. So, also, when in 1909 he was appointed a special delegate from Hawaii to the International Conference on Leprosy held at Bergen, Norway, he declined. It has been the same with offers of honorary memberships, degrees, and numerous other marks of appreciation. The evidences of kindliness which prompted the people he has deeply appreciated, but he did not care for any rewards.

Doctor Goodhue has not written any account of his work among the lepers, except those reports that are required biennially by the Hawaiian Legislature. Every mention of his work at Molokai that has appeared in public print or otherwise has been due to the interest felt by his numerous friends, but even to whom he has been consistently reticent regarding his work. Said one traveler of him: "I never saw a man so absolutely devoid of selfish ambition and love of praise." But in his reports he has taken pains to mention others who have been associated with him in his work, and even to exaggerate, perhaps, the importance of their help.

With the Roman Catholic fathers, he is on terms of deep friendship, although a Unitarian himself; and, like Lincoln, he has worked, not for religion's sake, but for the love of the brotherhood of man. He has devoted his spare time to his laboratory, where in 1905 he discovered the bacillus of leprosy in the mosquito and the bedbug, and at the request of the priests made, at the time, a report of the bearing of this discovery upon the spread of leprosy in Hawaii. In this report, he speaks of the assistance of Father James, now in Paris, while he also has often referred in a kindly way to "Father" Dutton, whose picturesque attitude toward lepers and Molokai has been widely advertised.

How much larger and more humane Doctor Goodhue's work has turned out than that so simply outlined editorially by a medical journal issued in his (that-time) home-town in 1900! Said *The Southern California Practitioner* for September, 1902, in referring to the recent assignment:

"Doctor Goodhue has been appointed medical superintendent of the Molokai Leper-Settlement. He is thirty-two years of age, a graduate of Rush Medical College, Chicago, 1897. He goes to Molokai for special work for the Government. The light-cure (x-rays) will be thoroughly investigated, as well as other curative measures. It is the intention of the superintendent thoroughly to investigate the cause of leprosy and, in connection with this, if possible, to discover what part the mosquito plays in the propagation of leprosy. The field is large, and the scientific world will watch the work of this new devotee with interest. . . . . May God bless him and all mankind in his work!"

Since his incumbency, the superintendent has prepared for the Hawaiian Board of Health the following reports of his work: "Alterant and Eliminant Remedies in Leprosy;" "Scabies Among Lepers;" "Some Clinical Observations in the Leper-Settlement;" "Treatment of Leprosy."

The latest and most important result of his work is embodied in a report just issued by the Board of Health, and is an account of a positive cure of leprosy by surgical measures.

After reviewing the results, in his hands, of the local and systematic treatment of leprosy, Doctor Goodhue says:

"P. was declared a leper, in 1906, by the Examining Board for Lepers, after the usual careful clinical examination, in conjunction with the report of the official bacteriologist. Entered the Settlement, Molokai, October, 1906. . . . . Operation was a radical dissection of the tissues involved. . . . . For conservative reasons, I have purposely avoided reporting the above case until a sufficient length of time had elapsed to place the result beyond the shadow of a doubt or the possibility of recurrence. Eight months after outlined operation, patient, brought before the official examining board, presented no physical blemishes, and rigid bacteriological tests were neutral. The patient was declared nonleprous, discharged from the Leper-Settlement, and is now leading a useful life as a road-overseer on the island of Maui.

"However absurd the statement may appear to those not thoroughly familiar with every phase of the disease, I boldly assert that, in the unsuspectedly large number of incipient cases where the disease is localized, these or any other treatments which remove the then circumscribed area or focus of infection, without opening channels for metastatic dissemination, will cure in six to twelve months' time."

This revolutionizes the whole subject, explains the puzzling incubatory period and

the mysteries of immunity and nonimmunity, and, best of all, holds out hope and cure for the victim of leprosy. Surely, reward enough for a decade of assiduous study and unselfish association with lepers in all stages of the disease.

"No other man," says one writer, "has done what he has. No one has been willing to expose himself to the disease as he does day by day, careful only so far as such care does not interfere with the greatest good of his patient; assiduous, painstaking, gentle, yes, loving in his attitude, sleepless often, for the sake of his charge. Never was there a nobler work done than is being done by Doctor Goodhue of Molokai; never has there been such unselfish, unheralded work, a work unknown except to those who come here to find it out. No pose nor religious devoteeism with which exaltation so many pass into lives of self-sacrifice. If Doctor Grenfell's work has been great, Doctor Goodhue's is equally so; and the results of his work are for the healing of the nations."

Doctor William Goodhue was born at Arthabaskaville, Province of Quebec, Canada, October 8, 1869, his parents being James Goodhue and Mariam Emerson, both Americans of old New England families. He was educated at home and in the public schools

Dr. William Goodhue

of Rochester, N. Y., whither he was sent. Removing with his parents, in 1884, to Riverside, California, he took, later, a business course in Los Angeles; but was persuaded by his brother, then a medical practitioner in that city, to begin the study of medicine. This he finally did with some misgivings, became his brother's protégé[1], went to Chicago, and graduated fromRush in 1897.

Just previous to entering college, he became engaged to a young woman whom he idealized, and when, later, she gave him up to marry an old man of assured position and wealth, he faltered—"I am heart-broken," he wrote, "life is dark before me." But he turned to his work with redoubled assiduity and mastered his weakness, thankful at last that he had not become married to a woman so unworthy of him. Perhaps because of this disappointment his heart is more tender with love and pity for those who suffer. He now is happy in the companionship of a lovely, devoted wife and a sweet little girl, Buddie, in whom he is totally wrapped up.

From a recent account of a traveler's interview with him, we get the following descriptive passages:

"He is tall and large, over six feet, I should judge, with a limp due, I am told, to an illness in early life. But his carriage is dignified, his face strong and benignant. Deep-set eyes, a rugged face with tanned skin, some wrinkles, grayish hair—a face resembling in many ways that of Lincoln. It is always serious, even when humor plays about the mouth; care-marked. He was willing to show me anything or tell me anything except about himself. 'I'm a privileged man,' he said, 'just blessed with a lot of work I am doing but lamely. If I had six individualities I might help these people some.' 'To what do you attribute your great success?' I asked him. 'If you call this great success, it may be due to several things: A good father[2] and mother—and,' with a twinkle in his eye, 'a girl who jilted me juft at the psychological moment."

Several of Doctor Goodhue's friends have determined that he must not any longer refuse the honors and rewards which are due him, and it is gratifying to know that steps are being taken to have the order of knighthood conferred upon this ardent lover of his fellow men.

Some Special "Stunts" For General Men

A Series of Brief but Practical Therapeutic Suggestions

By C. ELTON BLANCHARD, M. D., Youngstown, Ohio

THE reader must not assume from the title selected that I intend to urge every doctor to be his own specialist. There are certain fields of medicine and of surgery, to be well and rightly done, that must be followed as specialties. An honest, well-trained man in any of these fields, such as diseases of the eye, should be recognized and sustained. The business conditions under which the average family doctor has now to make his living are such that it is up to every man to care for every case he possibly can with a clear conscience.

Many family doctors have grown considerably tired and fatigued from carrying to specialists good-paying cases on a silver tray, so to speak. No fee-splitting or commission bait will tempt the honest physician to turn over his cases, and when one comes along that he can not handle he will surrender it as gracefully as he can. If a specialist dares to offer him a commission, he will consider it an insult, and will never give the same man a chance to repeat it.

Perhaps what I have to say will help some, at least, to care successfully for a list ofconditions that usually fall into the hands of men who use that élite phrase, "practice limited to" this or that. If this comes true, both of us will be happy.

The first thing on my list is asthma. I am not going into the pathology, etiology, and so on, of these conditions. If you are fond of this kind of reading, examine your textbooks. Enough has been written about asthma to fill many books, but now, as ever, it is one of the troublesome things in medical practice. For this reason, it has been used by nostrum makers and quack specialists to fleece the unsophisticated. After you have tried all the means and agents you can find, there are some cases you will have to send

1. "Will has always been my 'baby,' and I take credit to myself for saving him from a business career which he never could have pursued with success."—E. S. Goodhue, M. D., LL. D.

2. Of his father, Sir Wilfred Laurier lately wrote: "He was one of the noblest characters I have met with in the course of my career."

them to Colorado or almost anywhere to seek a change of climate, and especially to seek a dry, pure atmosphere.

Lobeline Sulphate in Asthma

We have in lobelia, it seems to me, the one dependable remedy for this trouble. The newer preparation, lobeline sulphate, seems to act very nicely to relieve the spasmodic paroxysm.

Lobelia was first called to my attention by old Doctor Grover, now dead, who used to say: "I use the fluid extract of lobelia in 5-drop doses every hour until they drool at the mouth, and they will not have the asthma any more." He might have added, "until the next attack comes on."

Every case of asthma must be studied in a general way. Often if the condition of autotoxemia is removed the asthma goes with it. One should be sure there is no irritating obstruction in the upper air-passages. Bringing the blood to the peripheral circulation helps many victims wonderfully, and for this end nothing is better than glonoin, strychnine, and digitalin. I like also the alterative effect of iodized calcium in full doses, 2 grains three times a day, in these cases.

In plethoric cases I extract all the water I can from them with apocynoid in conjunction with other cholagogs. If there is indigestion, this must be attended to by the best means at your command. Of late I have been using with some success, along with this treatment, the ozone-machine. Those who are enthusiastic about the ozone treatment can give you the theory. I have never depended upon it alone.

Some years ago an asthma-formula went the rounds of the journals, and it is a good one. I have used it with good results, and repeat it here for whatever it may be worth to you:

Ammonium iodide	drs. 2
Fl. ext. grindelia robusta	drs. 4
Fl. ext. glycyrrhiza	drs. 4
Tinct. lobelia	drs. 2
Tinct. belladonna	drs. 2
Syrup tolu, enough to make	ozs. 4

This is given, a teaspoonful three times a day, and every hour during the paroxysm.

We must not forget that asthma is often a reflex condition. Not long ago Dr. Albert L. Kiraley, of this city, called my attention to a patient of his whom he was treating for a prostatic enlargement. When the treatment had restored the prostate gland to about its normal size the patient's asthma (for which he had done nothing) disappeared.

Often dilating the anal sphincters and treating a prostatitis will cure an asthma. It is worth while, therefore, in order to exclude this factor, at least to examine male patients carefully as to the rectal and pelvic conditions.

Since asthma is not a disease, but a condition—or a symptom, rather—it is needful to study your case carefully, to discover the cause. You may find it in some nervous disorder. I have found nothing better than the triple arsenates, after meals, with one or two hyoscine, morphine and cactoid modified tablets, about bedtime, which often will give a much needed night's sleep. These are suggestions merely to palliate while you are getting at the cause.

When all these things fail, as they will sometimes, your best plan is to ship your patient out west somewhere and forget him.

Hydrocele Fees for Your Own Pocket

Our next "stunt" is hydrocele. This trouble has been a fine field for the crafty bamboozlers. It is distinctly a surgical disease, and when I first came out of college I did the usual radical operation—removing the sac and all that. I am going to tell you how you may put that fee into your own pocket and earn it as fully as if you sent the man to the hospital for the best fellow on the surgical staff to jingle it in his.

You know how to diagnose the condition, of course. You are not going to mistake it for hernia, orchitis or anything else. All right, then.

How to Operate for Hydrocele

Draw off the fluid with a small trochar. Get it all out and leave the cannula in place. Now instill from one to three drams of lysol into the sac through the cannula and withdraw the tube. Massage the scrotum thoroughly, and while doing so have your patient hold down firmly over the inguinal canal, so that none of the irritating fluid will be worked up into the peritoneal cavity. It is well to put on a pressure-bandage, which may be adjusted according to the afterreaction.

If it happens, as it sometimes does, that the cavity is sacular and your injection-fluid does not reach all parts of the cavity walls, this portion may begin to secrete again and begin to fill somewhat as before. You have only to repeat the operation until you have succeeded in closing all the secreting tissue.

Some operators prefer to use the following carbolic-acid solution, made as follows:

Carbolic acid.....min. 90
Dist. ext. hamamelis.....drs. 6
Water.....fl. drs. 6

To each 20 minims of this mixture is added 20 minims of fl. ext. quercus alba, glycerin and tincture of iodine, with water to make 4 drams.

This quantity of 4 drams is supposed to be injected into the sac and the excess squeezed out, which of course would necessitate leaving your cannula in place or a reinsertion of it after the massage process was completed.

This is a good preparation, but the lysol does just as well, and is ready for use.

Collect your fee, charged as for a surgical operation, lay it carefully in your billbook, and tell your patient to expect some pain and annoyance but that it soon subsides. See the patient in a week or a month, as the case may be; but ten-minutes' work usually ends the matter.

I have operated upon many of these men by this method with almost uniform success.

Something About Ear Troubles

Now a few words on the subject of ear troubles. The diseases of the ear are supposed to be distinctly a special field, but let me tell you now, for chronic catarrhal deafness, suppurating ears, cerumen plugs, and so on, you can do as much and as well as any specialist on earth, or at either address in the next world.

You may gain a great reputation for curing deafness by washing out plugs of ear-wax. Except for now and then a case in which you will have to soften up for a day or two with some oil instillation, your ear-syringe, a tray and a basin of hot water are all you need. Keep shooting it in until the external canal is clean, then spray with your spray-bottle, collect your dollar and say good-day; for that is all there is to it.

With suppurating ears, we have a more difficult problem. The treatment is local and internal. Locally, it is necessary to use some cleansing solution, peroxide of hydrogen, alphazone, etc. After the pus is well cleaned out, instill some of Abbott's antiseptic oil, cork it in with a plug of cotton, and then turn on your high-frequency current with a proper ear-electrode.

Whether the current carries the oil into the deeper tissues or not I cannot say, though some have claimed they could taste the oil after the treatment. The light rays of the current may do some good; in any case, I use it, for it brings good results.

Internally, I give calcium sulphide and as a tonic the triple arsenates and nuclein. Any other condition presenting itself should be attended to, and most of these cases will be cured promptly, two to four weeks, with now and then one more stubborn requiring longer time.

Chronic Catarrhal Deafness

Chronic catarrhal deafness is incurable. That is, whatever thickening of the drums exists will remain, with that much impairment of hearing. You may increase the hearing power 25 to 50 percent, and you may fully arrest the process. If you succeed in correcting the retraction of the tympanums and limber up the ossicular chain with effective massage and medication, you will cure the tinnitus aurium—something for which your patients will be extremely grateful. Ear noises have been the cause of many suicides.

You should have an air-pressure contrivance of some sort. When attached to your spray-bottle, with the usual menthol, etc., inhalant, spray out the external canals, nose, and throat. Then dilate the eustachian tubes by inserting your large-tip spray-bottle into one nostril while you hold the other closed. With your air pressure going, ask the patient to swallow, which will open and push out the drums, at the same time depositing some of your spray all along the way. If the patient has trouble to make the swallowing effort, a sip of water held until you are ready will do the trick nicely. Very rarely will you need to use the eustachian catheter or do any probing. A little practice will enable you to limber up this chain of bones and their attachments and get the drum to stand out as it formerly did.

Now apply your massage. Use no suction pumps, or air-machines of any sort on the external canal. More harm has been done with suction-engines than can be estimated. Vibratory massage is the thing.

I use an ordinary hand-vibrator of the Shelton or Victor type, and instead of using the ear-tips they recommend I use a long rectal tip, which gives me a soft and pleasant vibration. By asking the patient to tell you when you have it centered properly that the impulse strikes the drum and the bony chain, you will have no trouble to set up the motion in the part desired, without irritating the external canal or adjacent parts. This part of the treatment requires a little mechanical ingenuity, but is easily done.

After vibration, use high-frequency in both ears with ear-electrode inserted as close to the drum as convenient, so that the bulk of the current may enter the drum, and not the sides of the canal. Here, again, we may obtain some cataphoric action, and the noise and vibration of the current is helpful.

You know, of course, what to do in a general way for these people. They all take cold easily. You must stop this. Tone up the skin, improve the digestion, correct the catarrh of the stomach they usually have, aid elimination, get better tone.

I had in mind to say a few things about nasal polypi, enlarged tonsils, hemorrhoids, fistulas, fissures, etc., but my space is already filled, so these must wait on another issue. If these notes are helpful, say so, and more will be forthcoming.

[We "say so."—Ed.]

The Antithesis of Medication

A Talk about the Mexican Rebellion, Psychotherapy, the Treatment of Fevers and of Wounds, and other Matters of General Interest.

By ROBERT GRAY, M. D., Pichucalco, Mexico

UNTOLD horrors have darkled and sprinkled red sanguinous showers over this distracted country since last I bent me over a greeting to the fraternity of my native land. RUIN seems pendulous across the azure dome of the sky in letters of flame and blood.

American brothers, dismiss, I entreat you, dismiss from your minds the absurdity of seeking betterment of fortune anywhere in Mexico, where no Americans nor anything American are wanted.

Neither combating party molests me—but, then, I have lived here half a century, serving the poor and lowly. The American rubber plantations near me were cleaned up by rebels the other day—since June 15. Let this answer the hundreds of letters to which I cannot attempt to reply personally.

You people are so jumbled in contrarieties, both of theory and practice, and listing such formidable arrays of new ailments and remedies, that it seems vain and idle presumption to address you. Viewed from my standpoint, Dr. J. M. French and Dr. Richard Slee preached two sermons, in May CLINICAL MEDICINE, replete with the sterling ring of indomitable truth, of precious value in any critical practice.

(As I put the period to the last sentence, the rebels came galloping past my door—and they are here yet; that is, the day after that. There are no federals to oppose them.)

See What Old-fashioned Things Do

In your formidable procession of uncertainties, far the better plan would be to prove out the efficacy of a few familiar drugs, rather than be influenced by the doubtful experiences of others, many of them denying *in toto* that they possess any curative properties. I have proved them thus long since; and am still faithfully served by such as made legitimate promises.

The fallacy that fever is necessary and serviceable under any kind of circumstances holds surprising repute among the very elect. Maybe you have fevers of a severity unknown here; yet, I do not believe a word of it. I get rid of a fever's presence with the least practicable delay, and strive to keep it away. In some cases of intense inflammation, in pleurisy, and in puerperal fever, this is impossible, I grant. Still, alleviating modification follows my treatment, the same gradually dominating the fever, as the inflammation abates; and fever is necessary to sustain inflammation. We have fevers here that jump from 38° to 42° C. in a few minutes; and I know no fever not thus perilous, save in current chills and fever.

I use coal-tar derivatives (acetanilid by mouth, when possible; otherwise, equal parts of antipyrin and quinine sulphate liquefied, per rectum), to save the situation when fever is met hovering near the dead line. When the effect is attained, quinine arsenate is the reserve force dependable in pernicious fever; aconitine is the thing in pneumonia and typhoid fevers; and veratrine, in puerperal fever, to guard against recurrence; for coal-tar products are not curative. I use aconitine in solution for children in nearly all febrile contingencies.

Tincture of iodine lends surprising results in smallpox. By painting the pitting surfaces

two or three times daily with it, the scabs dry and fall off, leaving no marks, and being completely disinfected.

Also, 3 drops of the same tincture, in half a tumblerful of water, every half hour for three doses arrests hiccough of a perilous nature. Compound tincture of iodine, 5 drops in a teaspoonful of water, stops vomiting from any cause. Repeat if necessary.

One drop of wine of ipecac, taken after each attack, stops vomiting promptly—even black-vomit yielded for me several times in the epidemic of last year. One drop of same preparation every five minutes stops bleeding of the nose or lungs or other region.

I have effectually cured a sufferer from hookworm-disease with naphthol and calcium sulphide given internally, with purging and proper feeding. Naphthol, internally, had long been my sure cure for pinworms, which in duced the other experiment. Hookworm is rare here, as my investigations made for the Instituto Medico Nacional indicate.

The practical absence of pellagra here is a wonder, where a larger percent of moldy and weavel-infested corn is eaten by people than in probably any other country; this seeming to admonish us that such is not the medium of infection. I have been unable to find any for experimental observation.

The privies of all the world here, save of some foreigner, like myself, are the woods or behind stables or hedges, where chickens, hogs or buzzards devour the excrement instanter. This may be the reason why pellagra does not develop. There is abundant pernicious anemia here, very like that of Puerto Rico and other points where hookworm is the cause; but here the malady is found to be the outcroppings of vice—most frequently a compound vice, including excessive masturbation in both sexes. Usually relief is prompt upon abandonment of the cause.

An Enthusiastic Word for Psychotherapy

Here is a grand field of helpful utility by the employment of psychology, above and beyond any ordinary degree of rational anticipation. Such minds, submerged in the profound strata of ignorant degradation, seem as if electrified by a magnetic thrill when gently subjected to the subtle influence of psychology—possibly the first and only elevating glint of true light ever penetrating the dark corridors of despairing brains.

Do not spurn psychology. It will intensify the action of your drugs and help you beyond the latitude of physical medication. There is more in the realm of mind than in the stomach and bowel; more than your ethical rules of practice have ventured to inculcate. "Quack mind-healers" have groped in the startling shadow of sublime truth which none of us dreamed would burst forth in dazzling brilliancy, illuminating where there never had been hope of light.

One beauty of psychology possesses—it is an endowment unpatentable and free from proprietary manipulation: it is obedient to the command of any who cares to put its helpful attributes in requisition.

Wonders of Phenol Wound Dressings

These troublous times of bloody anatomical carving have lent me some pleasing, if horrible, instruction. One forearm lacerated fearfully and the bone broken in two places, and split, the hand hanging limp, was all put in place with a fair degree of regularity, poured full of liquefied phenol, well cushioned with a cotton compress and bandaged. Another had the articulation of the wrist parted, the bone cut somewhat at both points, the hand being nearly severed. Treatment the same. In both these cases, circumstances did not permit seeing the patients again; and the dressing was so cemented by blood that they were left so, there being little pain and no sign of inflammation. These dressings became loose of themselves some five or six weeks later, the lesions beneath being perfectly healed, as I have been advised.

Still another wounded was brought to my office in the night, with a machete-cut that struck the back of the hand an inch above the finger articulations, parting the middle and the ring-fingers an inch below the articulations, cutting out to the bone a slice of the forefinger, and leaving the little finger hanging by a strip of outside skin at the articulation. I had no assistant and only a poor light; and the two men who brought the patient had fainty tendencies at the sight of blood. The condition was such that I dared not apply anesthesia, not even H-M-C. Hence, I amputated the two stumps of fingers at the articulations in such short order that neither patient nor companions realized just what I was at till it had happened.

I covered the naked surfaces with cotton saturated in liquified phenol, putting thick cushion over and bandaging. The next morning I loosened the dressing with naphthol oil. There had been no hemorrhage after applying the phenol. I washed the outside lesion to the margin with alcohol, dressed with compound phenol (phenol, camphor,

chloral, equal parts), put a thin cloth covered with petrolatum over this, to prevent the cotton from sticking, then cushioned and bandaged. Thus was the treatment repeated for three days. Then followed an ointment of petrolatum, turpentine, and beeswax, 15 percent of phenol, and 10 percent of naphthol. There was never any pus. Never a drop of water was applied, the lesion being wiped clean with cotton. Not an hour of sleep was lost, nor the slightest complaint of pain, save when attempts were made to put the crazy little finger into some semblance of shape—although without success, there being nothing to stitch it to; the articulation being destroyed and the leaders parted; still, it grew fast, a mere hook on the side of the club of a hand. The thumb and fore-finger are perfectly natural in shape.

There is a weird fascination about the subtle mystery of phenol and its compounds; how the pure crystal, liquefied by heat, destroys the last particle of impurities in fresh wounds; staunches blood in the act of application; forms with the blood-serum an impervious shield over the face and edges of lesions—horrible wounds healing perfectly without further treatment save the initial first-help dressing, without inflammation, pus or pain.

The compound phenol preparation performs miracles almost as magical in suppurating wounds and old sores of any class, even syphilitic ulcers, without limit of employment at a dressing, as it is not absorbed any more than is the pure substance on fresh lesions; both being harmless to the healthy tissues, which they guard in a state of purest disinfection. Caution: The *pure phenol must not be employed where there is any watery formation; here the compound phenol may be used with impunity.*

THERE are men and classes of men that stand above the common herd: the soldier, the sailor and the shepherd not infrequently; the artist rarely; rarer still the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only remembered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried, in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer to the sick room, and often enough, though not so often as he wishes, brings healing.—Robert Louis Stevenson.

WHAT OTHERS ARE DOING

EMETINE AS A HEMOSTATIC

Valassopoula, a Greek physician of Alexandria, reports (*Bull. d. l. Soc. d. Hôp.*; through *Ther. Monatsh.*, 1913, No. 8) that hypodermic injections of emetine (Gm. 0.02) caused prompt arrest of severe hemorrhages in a case of rectal carcinoma. He also has had good results from these injections in the hemoptyses of tuberculosis.

TREATMENT OF VACCINAL ULCERS

According to Sexton (*Arch. of Ped.*, Feb., 1913), ulcers on the vaccination site, the result of extraneous infection, improve rapidly when the wound is filled with antistreptococcic serum. A small wet dressing of this serum should be applied, and over this some oilsilk, in order to keep the dressing moist as long as possible. The latter should be remoistened with the antistreptococcic serum three or four times daily, so as to prevent the gauze from becoming hard and stiff. This is another illustration of the value of the use of antistreptococcic serum locally.

HORMONAL FOR CONSTIPATION

In a paper read before the Congress for Internal Medicine, Luizi Fornaca stated (*Medicina Nuova*, No. 44, 1912; through *N. Y. Med. Monat.*, No. 10, 1913) that he has obtained good results, in a number of instances of chronic constipation, from hormonal; only, however, when administered intravenously. The action sometimes has continued over several weeks; even, in one case, two months. Several times postoperative paralytic ileus was thus overcome by this means.

REASSERTION OF THE SPONTANEOUS GENERATION OF LIFE

In opposition to the weight of scientific evidence, and unabashed by the volume of attacks upon his previous public assertions, H. Charlton Bastion, in a contribution to *The British Medical Journal* (Nov. 12, 1912), reasserts his conviction that life is generated spontaneously. His lengthy (illustrated) article describes his further experiments in which he has seen low-grade organism originating in tubes hermetically sealed, sterilized and subjected to prolonged incubation.

TRANSPLANTATION OF FAT-TISSUE

Operations involving auto- and heterotransplantations of all kinds of anatomical structures are rapidly growing in number, as well as in audacity.

One procedure of this nature is the free transplantation of fat-tissue into joints. Thus, for instance, Roepke has reported (*Wien. Med. Woch.*, No. 22, 1913) that he has inserted fat-tissue, in many cases, into the joints of fingers, wrists, elbows, shoulders, hips, and knees, and that flaps the size of the palm of the hand survived, and results were the best.

NEW PERCUSSION METHOD OF DIAGNOSING APPENDICITIS

A new, preoperative method of diagnosing appendicitis by percussion dorsally is described by W. Ewart in *The British Medical Journal* for December 28 last.

Ordinarily, in percussing the pelvic region, it is pointed out by the author, a resonant sound is obtained over the sacrum and the iliac alæ, while one gets two relatively dull sounds corresponding to the region of the posterior tuberosities. This latter muffling is caused in part by the position of the large large blood-vessels, but is more pronounced on the right side, because of the airlessness and thickness of the appendix.

It is this latter phenomenon which Dr. Ewart utilizes for his diagnostic purposes; for, when there is present inflammation of the appendix, the muffling of the percussion-sound at this spot (on the right side) is greatly increased, and also extends to the ilium and the sacrum. Furthermore, this symptom is more noticeable in retrocecal changes and abscesses, which many times cannot easily, or not at all, be diagnosticated by abdominal palpation; hence, is doubly valuable.

Operative removal of the diseased appendix causes this right-side diminution of the percussion-sound to disappear, or it leaves (more rarely) a tympanitic percussion-sound. If this does not happen, then the operation was imperfect or there is some complication—an abscess, for instance. The article should be read in full in the original.

PARENTERAL: A CONVENIENT NEW WORD

Of late, we occasionally encounter in our German exchanges a word new to us and not recorded in the very latest medical or general dictionaries, yet, withal, a most handy addition to our vocabulary and deserving a permanent place in technical literature. The word is "parenteral," a compound of "para" (beside, beyond, outside) and "enteralis" (pertaining to the enteron, or intestine); its meaning, thus, being, in medicine, "outside of or not passing through, the intestinal canal."

The application of "parenteral," thus far, is to the method of administering remedies, when one wishes to speak generally of hypodermic, intramuscular, intravenous, epidural, and other methods, as opposed to giving them by way of the mouth. E. g.: "Some remedies must be administered parenterally, being without effect when taken internally."

TO PREVENT ACCIDENTAL POISONING WITH BICHLORIDE TABLETS

Inasmuch as cases of accidental poisoning with mercury-bichloride tablets are increasing in frequency, F. M. Apple, among others, suggests (*Drug. Circ.*. Aug., 1913) that these tablets be given the shape of a coffin, and, better, to impress upon them, sunken in, the familiar skull and crossbones. Druggist Apple wants this made compulsory.

The idea is not a bad one—as applied to the article sold promiscuously to the lay public, of course; and, since these tablets are to be dissolved in a large volume of water for injections and antiseptic lotions, it would be still better—for obvious reasons—to make them fully the size of throat lozenges, color them dark-blue, and scent strongly with thymol. The containers also might be coffin-shaped. Still, such tablets for use by professionals (and legally strictly confined to them) should not come under this regulation.

There is something startling in this sudden outbreak of bichloride deaths, and in that revelation of a bottle on every woman's medicine-shelf, side by side with the equally ubiquitous aspirin. There is something sinister in this. Surely, not all these people can keep this powerful germicide at hand for mere disinfection purposes—then, how, when, where have they learned of uses of this harmful chemical not ordinarily suggesting themselves, even to the medical mind? How is it that these bichloride tablets by the bottle seem a common commodity in every drugstore, how is it that every young girl attaining to puberty seems to have them handy?

BIOLOGIC THERAPY IN KIDNEY AND BLADDER INFECTIONS

Kreuscher (*Surgical Clinics* of John B. Murphy, Aug., 1913, p. 552), claims that a large field for biologic therapy will be found in kidney and bladder infections. The colon bacilli, staphylococci, and streptococci, and often the pneumococci gain entrance to the urinary tract and cause marked frequency and often painful micturition. One of the most striking cases of this type came to Mercy Hospital late in October, 1911.

The patient was suffering from frequent and painful urination, this having extended over a period of about ten months. After taking an accurate clinical history, it was found that the woman had been troubled with dysentery of several weeks' duration, and that her present trouble dated from that time and had become progressively worse.

Cystoscopic examination showed no pus coming from either ureter, also the absence of a neoplasm or foreign body in the bladder. The culture from the urine warranted the diagnosis of cystitis caused by the bacilli coli and staphylococci. The autovaccines were administered about every five days, whereupon the patient made a rapid and complete recovery, and has remained permanently well.

Another patient came to the office on December 11, 1911, giving the history of a continued illness for four months, with repeated daily attacks of severe pain deep in the perineum, associated with chills and high temperature, frequent urination (every quarter to one hour), and presence of large quantities of pus in the urine. The prostate gland was not perceptibly diseased. Culture from the urine showed bacilli coli and staphylococci.

Vaccines were prepared and given, and the

patient improved rapidly during several weeks, followed by a period of nonimprovement for a few weeks. Another culture showed that all the staphylococci had disappeared, leaving a pure culture of bacillus coli. From this a vaccine was made and injected in the usual way. This was in February, 1912. On April 1, 1912, Dr. Murphy made the following note: "The pains are all gone. Only one morning urination. The urine is absolutely normal." Patient permanently cured. On July 2, 1913, the patient reported himself perfectly well, with no evidence of return of the trouble.

A NEW PLANT-DRUG FOR CHOLELITHIASIS

Dr. Hagelweide, of Lunow, tells (*Klin.-Ther. Woch.*, 1913, No. 18) of a tropical plant claimed to possess curative virtues for cholelithiasis. The plant (marketed by M. Sperling, Berlin) is imported from the Sunda Islands, where it is known as daun komis kodjing; but has not as yet been classified. An infusion of the leaves and stems is used by the natives. Hagelweide claims to have had success with this new drug.

REMEDY FOR EPILEPSY IN CHILDREN

Spasmosan (composed of sodium bromide, phosphorus and iron compounds, cascara sagrada, and valerian infusion) is recommended by Dr. A. Fraenkel, of Berlin (*Allg. Med. Zentr.-Ztg.*), for treating epilepsy in children. In the case of a girl of three years, a permanent cure was effected when for two years no sedative, not even a bromide—30 grains per day—had given any relief.

A better sedative than the bromides (the really potent factor in "spasmosan") is solanine—better because even more effective therapeutically and practically non-toxic. It should be used in practically every case of epilepsy. Laxatives and intestinal antiseptics are almost always indicated in this disease; iron and digitalin may be needed; and focal sources of reflex irritation, especially nasal, intestinal, and genital, should always be sought, and removed if possible.

STERILE GLYCERIN AS A DRESSING FOR WOUNDS

Hardouin, of Angers, recommends, in the *Province Médicale* (Aug. 2, 1913, p. 344), the employment of pure, sterile glycerin on ordinary sterile cotton compresses in the treatment of wounds. The gauze should be thoroughly soaked or impregnated with the glycerin before applying, in order to prevent adherence to the raw surfaces. The principal advantage claimed for these applications is, that they suppress almost completely the pain throughout the stage of dressing, even in conditions generally the most painful, such as appendicitis or osteomyelitis.

Glycerin is hygroscopic and favors osmosis of the liquids from the depths of the wound toward the compresses and the exterior, thus having a great advantage over oil dressings, which prevent the compresses from absorbing the discharges, prevent drainage of the wound liquids to the exterior, and therefore close, instead of draining, the cavity. When absorbed, glycerin is not harmful, nor does it cause any discomfort, provided it is neutral in reaction, giving merely a brief sensation of warmth, which is not disagreeable.

Thanks to its absorptive power, the glycerin cleanses quickly serous wounds, and, being free from pain, the compresses may be carried down to the bottom of troublesome wounds, in order to cleanse and drain them. The compresses can be removed readily from the deepest wounds, and that without pain, leaving behind a raw surface, not bloody, of good appearance, and to which there is no adherence whatever. Furthermore, glycerin, when used near the peritoneum and intestines, acts as a laxative, which is also an advantage.

The advantages claimed for the glycerin dressing are summed up by Hardouin as follows: (1) easy to prepare; (2) inexpensive; (3) painless; (4) drains and cleanses thoroughly; (5) prevents remote secondary infection; (6) is laxative in certain conditions; (7) is entirely inoffensive.

BELLADONNA FOR REDUCING OBESITY

Many remedies have been suggested for the reduction of superfluous fat, the latest being offered by Franke, who, in the *Medizinische Klinik* (1913, p. 995), advises the administration of 15-minim doses of tincture of belladonna thrice daily, about fifteen or twenty minutes before meals. It is claimed that this remedy diminishes hunger, as a consequence of which one's weight is reduced. Franke claims that no ill effects have been observed from this medication, indeed, the condition of the heart is really improved. Obviously, this treatment should be carried out under strict supervision.

It naturally occurs to the average physician that the use of belladonna in the way suggested would cause dryness of the mouth and throat, besides more or less disturbance of vision, symptoms which always will be uncomfortable and sometimes depressing. A more satisfactory method of treating obesity is found in the obesity tablets, which contain colchicine, strychnine, berberine, caffeine, phytolacca, etc. Even when this remedy is used, it is advisable to restrict the quantity both of food and of liquid, and to drain out the excess of fluid with laxative salines. The addition of thyroid extract to this treatment will practically always bring results.

PHOSPHORUS IN DISEASES OF THE LUNG

Ferguson Lemon, of Melbourne, Australia, has contributed to *The New York Medical Journal* (Aug. 16, 1913, p. 320), a remarkable paper upon phosphorus. For a number of years Dr. Lemon has been using this drug in the treatment of acute and chronic pulmonary conditions. From his former partner he had learned that pure phosphorus (1-1000 to 1-200 grain at fairly short intervals) would bring about an almost marvelous shortening of the crisis of lobar pneumonia. While treating such a lobar pneumonia occurring in a patient far advanced in pulmonary tuberculosis and suffering from recurrent hemorrhages, he learned that, when given in 1-500-grain doses, the phosphorus had a wonderful effect upon the tuberculosis. The picture was one of very widespread tuberculosis degeneration.

Observing the marked improvement following the temporary use of phosphorus, Dr. Lemon decided to give it a further trial for a period of about three months. At first there was increased expectoration, but the night sweats were diminished. Soon after this, the cough began to be harder and the sputum lessened in quantity. The temperature meanwhile declined. After the tenth week the cough was practically the only troublesome symptom; the night sweats had completely disappeared and the sputum was practically absent. At the end of three months the condition of the lung was wonderfully improved, the patient had gained fourteen pounds in weight and seemed quite a different man. This method of treatment was continued, and the patient is today comparatively healthy and able to carry on his work as a proofreader.

Following that experience, Dr. Lemon has employed phosphorus in a number of other cases of tuberculosis several of which are reported in detail. While it has been mainly used in tuberculosis of the lungs, it has also been tried in tuberculous disease of the glands and joints, and where the condition has not come to actual suppuration, some improvement and apparent cure has resulted.

The following prescription has often been employed:

Calcii hypophosphitis.....drs. ½ to 2
Tincturæ phosphori (1:1000)..drs. ½ to 2
Liquoris arseni iodidi (1:100)..drs. ½ to 2
Syrupi ferri iodidi.....ozs. ½ to 1
Aquae, q. s. ad.....ozs. 6

M. et Sig.: One dessertspoonful in water, four times a day after food and at bedtime.

In one case described by Dr. Lemon there was no improvement; three were improved but not cured; and ten are apparently well.

Dr. Lemon also recommends the use of phosphorus in the treatment of acute pneumonia. He says that in several hundred patients treated with it, there has not been a death, except one, this being a person suffering from chronic cirrhosis of the liver.

The usual prescription for pneumonia is as follows:

Tincturæ phosphori (1:1000)..drs. ½ to 1
Liquoris ammonii acetatis....oz. 1
Spiritus ætheris nitrosi.....drs. 4
Aquæ, q. s. ad.....ozs. 6

M. et Sig.: One dessertspoonful hourly for six doses. At alternate hours for six doses. Then every three hours till crisis.

THE THERAPY OF PHENOLPHTHALEIN

The exact mode of action of phenophthalein still is a moot question, one explanation (that of Vamossy) being that in the intestine it is converted into disodium phenophthalein. Now A. V. Sztanskay claims (*Apoth. Zeit.*) that the soluble active compound is phenolphthalein sodium carbonate ($2\ C_{20}\ H_{14}\ O_2\ 6\ Na_2\ CO_3$), a combination not before known.

TO GET RID OF LICE: VALUE OF KEROSENE

If just hair-oil will suffice to suffocate head-lice, as a correspondent states in the August number (p. 684), that ought to be "the best" remedy of all. It seems, though, that the oil must be poured on quite to saturation; in which case the victim better should wear an impervious close-fitting hood for a day. However, a sure and harmless (even useful) remedy is kerosene, which kills the "critter" instantly, while being good for dandruff and

falling-out of the hair. (It is just as good on dogs, and on cats, if applied sparingly; little kittens are very sensitive.)

The simplest way to use kerosene is with a pipette, dropping it upon the lice when in range of vision, and to conclude the "seance" by liberally moistening the scalp with it. Repeated daily, this quickly overcomes the plague. A daily actual saturation, or wetting, with the kerosene would act more promptly.

By the way, kerosene ought to be employed far more freely and regularly as a hair-dressing, its present state of purification having deprived it of all disagreeable properties. As a rule, a pipetful every morning is much superior to grease oils, while rendering the hair pliable, fluffy-like and free from stickiness. One family (three long-haired ladies and one man) has thus used it for fifteen years, with greatest satisfaction.

BROMURAL IN NEUROSES OF CHILDREN

Bromural, or mono-brom-iso-valerianyl-urea (nearly tasteless and not readily soluble in cold water), is warmly recommended by Schaefer (*Ther. d. Gegenw.*, No. 3, 1912) in all functional disturbances of the nervous system in children. Among the disorders mentioned are, for instance, epilepsy, bedwetting, night-terror, wakefulness, and infantile hysteria.

EMETINE TREATMENT OF AMEBIC DYSENTERY IN NEW YORK

Dr. William V. Hayes reports, in *The American Journal of Surgery* (Sept. 1913, p. 349), that he has had an opportunity to test the emetine treatment of dysentery in two or three instances, with results that have been uniformly satisfactory. He describes one case in detail.

The patient was a young man, age 21, who had never been in the tropics or in the South. He presented himself at the Polyclinic Hospital the latter part of February. He began to have diarrhea in September, 1911, and in December of the same year discovered that he was passing blood. After two weeks in bed he felt well for six or seven months, when the dysentery returned. He secured relief and was in fair health until December, 1912, when he was troubled again with frequent, bloody movements—ten to twelve daily. These had persisted, during the preceding eighteen months, the patient losing fifteen pounds in weight. For some time he had been unable to work.

A careful examination showed the presence of shallow ulcers in the rectum, covered with grayish membrane and bleeding easily. The feces were thin, blood-stained, and contained mucus, and the laboratory report showed "amebae present in abundance."

The patient was put to bed and placed on a restricted diet, but in two days there was little improvement. He now was given ½-grain doses of emetine hydrochloride, injected into the gluteal muscles twice daily for three days, then once daily for seven days longer. After two days of this treatment the blood and mucus disappeared from the stools and the number of dejections diminished by two or three daily. On March 4, no movement occurred until an enema was given.

The diet remained the same during the first week in the hospital, and after this the ordinary soft diet was permitted. After two weeks of this treatment the rectal ulcers were found to have healed, when the patient was permitted to go home, since which time he has speedily gained in weight and strength, with no recurrence of the dysentery. Later examination of the stools showed no amebae.

EMETINE IN DYSENTERY: REPORT OF THIRTEEN CASES

From *The New York Medical Journal* we glean the following excellent abstract of a paper upon emetine, published in *The China Medical Journal* for July, 1913, by Dr. A. C. Hutcheson, who has employed emetine hydrochloride in thirteen cases of dysentery. His conclusions are as follows:

1. Emetine in amebic dysentery is simply wonderful in its efficacy.

2. In undiagnosticated cases of chronic dysentery, it will succeed in the majority, as most of these are amebic.

3. In double infection of ameba and schistosomum, it will kill the amebæ and probably stop the dysentery.

4. In pure schistosomum cases, it is at least worth trying.

In 7 of the 13 cases, the ameba was found on examination. One case was, apparently, amebic, though examination of the stools failed to show the presence of amebæ. The patient left the hospital on the seventh day, cured of symptoms. In 2 cases, there was infection with both the ameba and schistosomum japonicum. In 3 cases, the infection was with schistosomum alone. All 3 were chronic cases. In 2, blood had disappeared from the stools on the sixth day,

under emetine. In the third case, the patient left after seven days, showing no improvement. In this case, the author found an active miracidium at the end of the treatment, which he thinks would rather argue against the efficacy of emetine, at least so far as affecting the eggs is concerned. The emetine in these dysentery cases was administered in 1-3-grain doses of the hydrochloride, twice daily, by hypodermic injection.

INFANTILE DIARRHEA CURED WITH BULGARIAN BACILLUS TABLETS

One of the most convincing demonstrations of the value of Bulgarian baccili in the treatment of infantile diarrhea is furnished by Ralph Oakley Clock in a paper contributed to *The Journal of the American Medical Association* (July 19, 1913, p. 164). Dr. Clock had opportunity to demonstrate the value of this method of treatment (he calls it the "implantation method") in the outpatient department of the Babies' Hospital of the city of New York during the summer months of 1912. Every infant suffering from diarrhea, without selection, was placed upon this treatment. Altogether, 117 children thus affected were treated; of these, 116 recovered and one died, the death occurring in a case of severe enterocolitis which had persisted for two weeks prior to treatment.

The ages of the patients ranged from six weeks to two and one-half years. There were 4 cases of enterocolitis and 113 cases of gastroenteritis; and of the latter 47 were mild, 52 were severe, and 14, toxic. In 46 cases, the number of stools daily ranged from 10 to 15, and in the remaining 71, from 6 to 10. Mucus was present in 63 cases and blood in 18. In 49, there was an elevation of temperture. Of these patients 16 were breast-fed and 101 were bottle-fed.

All these patients were immediately placed upon pure culture of the true bacillus lactis bulgaricus, given in tablet form, one or two tablets being administered every two or three hours; although in severe cases two or three tablets were given every two or three hours before and after each feeding, making in some instances a total of 42 tablets in twenty-four hours.

The striking thing about this method of treatment was, that in 74 babies the mode of feeding was not changed; that is, breast-fed babies were permitted to continue to nurse and the bottle-fed babies received their regular milk or cereal mixture as before. Presumably as a method of "control," 43 of the little patients were placed upon the classical starvation diet of barley-water for twenty-four to forty-eight hours, after which small quantities of milk usually were allowed. Of the 32 on the starvation diet, 29 were given a preliminary dose of castor oil.

As a result of the administration of the Bulgarian bacilli, the number of stools usually decreased very rapidly, although this did not always occur. Within an average of 3.1 days, the color of the stools became normally yellow, while mucus and blood invariably disappeared on the second day. As a rule, vomiting ceased and fever subsided at the same time, while the appetite immediately improved.

The most striking feature of the treatment was the phenomenal gain in weight. This was most remarkable in those babies who were continued on the milk diet. Every one of all the 74 patients, thus treated, whether breast-fed or receiving milk or a mixture of milk and other foods, gained rapidly. The average gain in these patients was 1.2 ounces for the first twenty-four hours and 6.2 ounces at the end of the first week.

The patients on the starvation diet also generally increased in weight, but they showed an average gain only of 0.2 ounce at the end of the first day and 1.7 ounces at the end of the week. While every patient (except the one who died) improved upon the Bulgarian bacilli tablets, the most decided improvement was manifested in those who continued to receive milk.

Dr. Clock is of the opinion that starvation diet, accompanied by purgation, is productive of loss of weight and of strength and serves to prolong the course of the disease. He further believes that such a method of treatment can no longer be advocated in the treatment of infantile diarrhea after observing such striking results following the use of the Bulgarian bacillus in connection with milk feeding.

THE PHARMACOLOGIC ACTION OF HELENIN

While helenin is an active constituent of elecampane (inula helenium), it is also present in helenium autumnale, a well-known American plant found all over the United States, and by some believed to be responsible for cases of hay-fever. This plant possesses marked sternutatory properties and for this reason is commonly known as sneezeweed.

Paul D. Lamson, in an interesting study of the pharmacologic action of helenin

published in *The Journal of Pharmacology and Experimental Therapeutics* (July 1913, p. 471), asserts that this sneezing may possibly be accounted for by the fact that helenin is a local irritant to the mucous membranes. He says: "I personally know of a dinner at a yacht-club in Marblehead where the room and table were decorated with helenium autumnale. When the guests arrived one after another began to sneeze and weep to such an extent that all the flower decorations had to be removed."

Helenium autumnale has a very marked poisonous effect on cattle, horses, and mules, probably owing to its irritant action upon the mucous membranes.

Crystalline helenin, Dr. Lamson states, has a very bitter taste. The most characteristic effect of the drug is its local action on the mucous membrane. When working with it in powder form, it causes violent sneezing and lacrimation; and the same action is exerted upon the mucous membranes of dogs and rabbits. Applied in a salve to the upper arm, it causes no redness or irritation. A half-saturated watery solution, when injected subcutaneously, produced a burning sensation lasting some ten minutes, followed by considerable edema, but without any sign of abscess formation. No general or absorptive action was shown after subcutaneous injection.

Helenin is shown to be a severe irritant to the intestinal tract, its action here being comparable to that on the eye and the mucous membrane of the nose. Given to a dog, it caused vomiting, tenesmus, passing of yellowish, slimy and bloody stools, and finally death. Albumin was found in the urine, with granular, epithelial and hyaline casts.

Tested on frogs by injection into the dorsal lymph-sac, it was found that the respiration first stopped, then increased in force and frequency, and then returned to normal. The helenin also caused slowing of the heart, and finally cessation of pulsation of that organ, which came to a standstill in one or two hours in a semi-dilated condition.

The conclusion reached is that helenin causes a general paralysis of the heart, its action being exerted upon the heart-muscle itself. He concludes that the drug cannot be classed as a protoplasmic poison, and that it has no noticeable action as an antipyretic.

Lamson points out that helenin has been mentioned in the literature as a tonic, febrifuge, anthelmintic, diaphoretic, and as an antidote for colds as well as for venereal diseases. Its pharmacologic properties, he holds, justify its use as an errhine. It could be used, in small doses, as a stomachic, by reason of its bitter taste and its irritant action on the gastric mucous membrane. As a vermifuge, its intense local irritant action would exclude its use, except in very dilute solutions under which latter condition its action on the parasites would be doubtful. Readers of this journal will also remember that helenin has been highly recommended in whooping-cough and to control cough, especially when associated with too abundant expectoration.

ELECAMPANE, OR INULA HELENIUM

Physicians who use that excellent remedy, helenin, the active principle of elecampane, will be interested in an article on inula helenium in *The Eclectic Medical Journal* for March (p. 120), written by Dr. Herbert T. Webster. He says that this remedy is particularly indicated in the subacute stage of bronchial irritation, especially in cases where the cough is deep, harsh and rasping, has continued for several days and the thoracic muscles have become strained, sore and tired. There is a feeling of discomfort behind the sternum, especially when coughing. Often there is more or less headache, resulting from cerebral congestion attending the repeated coughing. When headache is present it may be relieved by elecampane alone, or the addition of small doses of iris will be found helpful. Whether the cough is tight or loose, is not a matter of great value as regards the indication for elecampane. Dr. Webster has never employed this remedy in anything except winter cough, but it may be of value in other forms, he is convinced.

Readers of CLINICAL MEDICINE should use helenin more. The suggestions just given will help to its more intelligent employment. Reports will, of course, follow.

COMPARATIVE STRENGTH OF THE STRYCHNINE SALTS

From time to time inquiries have been received from readers of CLINICAL MEDICINE as to the relative alkaloidal strength of the different salts of strychnine. This information lately has been supplied by George Lunan in a brief article contributed to *The Pharmaceutical Journal and Pharmacist* (Aug. 23, 1913, p. 322).

Mr. Lunan presents a number of tables comparing the basic strength of the most important salts of the alkaloid. In Table I, he shows that, practically, strychnine arsenate contains 69 percent of strychnine;

while the sulphate contains 78 percent; the hydrochloride, 84 percent; the nitrate, 84 percent; and the formate, 88 percent. Tables II and III are presented as given by Mr. Lunan:

Table II.—The amount of basic strychnine alkaloid contained in the dose of the respective salts as given in the top line:

	gr.	gr.	gr.	gr.	gr	gr.	gr
Dose of salt	1-15	1-20	1-30	1-40	1-50	1-60	1-100
Strychnine contained:							
Arsenate	1-22	1-30	1-44	1-60	1-72	1-88	1-144
Sulphate	1-20	1-26	1-40	1-52	1-64	1-80	1-128
Nitrate	1-18	1-24	1-36	1-48	1-60	1-72	1-120
Hydrochloride	1-18	1-24	1-36	1-48	1-60	1-72	1-120
Formate	1-17	1-23	1-34	1-46	1-56	1-68	1-112

Thus 1-15 grain of the hydrochloride contains 1-18 grain of basic strychnine.

Table III.—Showing amount of the respective salts equal to the fractions of a grain of strychnine alkaloid indicated in the top line:

	gr.	gr.	gr.	gr.	gr.	gr.	gr
Strychnine alkaloid	1-15	1-20	1-30	1-40	1-50	1-60	1-100
Contained in:							
Arsenate	1-10	1-14	1-20	1-28	1-35	1-40	1-69
Sulphate	1-11	1-15	1-22	1-30	1-30	1-44	1-78
Nitrate	1-12	1-17	1-24	1-34	1-42	1-48	1-84
Hydrochloride	1-12	1-17	1-24	1-34	1-42	1-48	1-84
Formate	1-13	1-18	1-26	1-36	1-44	1-52	1-88

From this table it will be seen that, for instance, 1-12 grain hydrochloride contains 1-15 grain of basic strychnine; 1-30 grain of the sulphate contains 1-40 grain of the pure alkaloid; while 1-40 grain of the arsenate represents 1-60 grain of the base.

It follows that the dose of the salts of strychnine should be greater than the dose of the basic strychnine, alkaloid, which is usually given as 1-60 to 1-14 grain. Thus, to compare the hydrochloride, the dose should be 1-48 to 1-12 grain.

Hypodermic tablet makers use the sulphate largely because of its ready solubility (partly owing to the larger percentage of water crystallization), but it should be remembered that a hypodermic tablet of 1-30 grain of strychnine sulphate contains 1-40 grain of strychnine alkaloid, a 1-60 grain tablet, 1-80 and a 1-100 grain tablet, 1-128 grain, respectively.

LACTIC-ACID-BACILLUS SPRAY IN DIPHTHERIA

In an effort to clear the throat of diphtheria bacilli in the case of a nurse (in the Rochester, Minnesota, State Hospital for the Insane) who showed no clinical symptoms of the disease, Harold B. Wood (*Jour. Am. Med. Asso.*, Aug. 9, 1913, p. 392) began spraying the nose and throat with a suspension of lactic-acid bacilli. Prior to this time diphtheria antitoxin had been given and local antiseptic solutions applied, but in spite of this treatment cultures had remained positive for about seven weeks; hence the resort to the lactic-acid bacilli, which was applied in sterile normal salt solution, with a sterile atomizer, after a one- or two-day culture on agar.

The spraying was continued for one week, when cultures failed to show the diphtheria bacillus, without subsequent positive growth developing. Because of the success of this method of treatment, it was employed in several other cases of diphtheria in which there was persistence of the organism. In every instance the result was satisfactory. With the lactic-acid tablets doubtless a solution could be extemporized. Would it not be valuable in any case of diphtheria?

RADIOACTIVE SPRING-WATER

In a bulletin recently issued by the Department of Agriculture, through the Bureau of Chemistry, the following warning is made regarding socalled radioactive mineral waters offered for sale in bottles:

"There are indications of the beginning of an attempt to perpetrate a great fraud on the American people through advertising certain mineral waters as possessing radioactivity. These waters, in some cases, are taken from springs the waters of which as they come from the ground do possess certain radioactive properties. Examination of many of these waters by the Department's specialists indicate that whatever radioactivity they possess at the spring is due almost entirely to radium emanation rather than to the presence in the water of any substance possessing radioactivity. These emanations in the form of gas quickly disappear from the water and, as a result, after the water has been bottled a short time, it will possess practically no radioactivity.

"The belief long held by many people that some mineral waters used at the springs are more effective than when bottled has been explained by some authorities on the ground that the beneficial effect of these waters is due to radioactivity. As the radioactivity disappears soon after the water is taken from the spring, any effect due to radioactivity must be lost in a short time. If the radioactivity of a water in a spring is 100, four days after bottling it will be practically nothing, compared with the original radioactivity of the water at the spring.

"The public, therefore, is warned to regard with suspicion any water advertised as possessing radioactivity. So far as the Government's specialists have been able to ascertain, no bottled water, no matter how radioactive it may have been at the spring, retains this radioactivity for any length of time."

INCONTINENCE OF URINE IN CHILDREN

When confronted by an obstinate case of enuresis in a child, all possible causative factors must be considered before attempting its alleviation; and they are numerous and diverse, as every physician knows; the first question being as to whether the trouble is an acquired one or was congenital. Among the leading physical causes, enumerated at random, are: hyperacidity or an irritant quality of the urine, calculus, phimosis, narrow meatus, ulceration or inflammation of the urethra, epispadias or other anatomical defect, tuberculosis, neoplasms, cystitis, vulvitis, anal fissure, worms, even adenoids. Psychically, there may underlie subnormal mental development or neglected training. The cause naturally must determine the course of treatment.

In a discussion of this troublesome fault in the young, J. W. Simpson points out (*Edinburg Med. Jour.*, 1913, p. 49) that incontinence exists when at the end of its third year the child is given to bedwetting in spite of all systematic attempts to correct the habit. Above all, of course, the fundamental cause must be removed, so far that is possible.

Next, in the management, come general measures designed to increase bodily vigor and to obviate possible contributive, irritative factors, in the nature of feeding and dressing, and the like. Under this heading may be named change of environment, fresh-air life, hydrotherapy, nutritive but non-stimulating food (coffee, tea, spices forbidden), plenty of water to drink in the day, but scantily or none with and after supper, emptying of the bladder at definite hours and intervals (particularly upon retiring for the night, and waking the child two or three hours later, to urinate), light bed-covering, sleeping lying on the side, and, perhaps, elevation of the foot-end of the bed and a pillow under the hips. Hypnotic suggestions.

The medicinal treatment, if at all indicated, must be systematic and extend over many months, and, among the remedies, Dr. Simpson places belladonna (and atropine) at the head; herein following Dr. Thursfield, who, though, includes potassium citrate and hexamethylenamine (urotropin), because of their influence upon the urine. Of course, the urine must be systematically tested.

When the urine is practically normal, the patient is toned up, with strychnine as the medicinal agent. After a while the atropine course is cautiously instituted, starting with minute dosage, very gradually augmented, and keeping the child just within the limits of tolerance (as evidenced by throat and eye symptoms). To be continued until absolutely cured. [While the author gives the preference to the belladonna over the alkaloid, this is exactly the time where the superiority of reliable atropine granules given to physiologic effect, can brilliantly be demonstrated. —Ed.]

When the child's urine is excessively acid, loaded with urates, reduced in amount, and of high gravity, this state is overcome with an alkali citrate, and interdiction of meat. Subsequently tone with strychnine, then wind up with atropine, as described.

In the third group, where the urine is increased and of low gravity, contains triple phosphates (or, also, albumin and pus), and is of neutral or alkaline reaction, the medical attendant should prohibit, in the food, the carbohydrates, regulating the diet otherwise, and prescribe, as long as need be, acid sodium phosphate. Wind up with the atropine-therapy.

In his last group of enuresis-patients, Dr. Simpson places those in whom the urine contains bacteria. Here, if the infection is one of the pure colon-bacillus, with acid urine, he reduces the latter condition, then give urotropin; if, however, it is a mixed infection, he prefers salol, supplemented, in troublesome cases, by coli-bacterin inoculations.

While the author has given many other expedients careful trial, he reverts to his atropine-therapy as the one best and reliable resort, while rejecting, as useless, hydrotherapy, epidural injections, and hypnosis.

FREE TRANSPLANTATION OF PERITONEAL TISSUE

In order to repair the lesion incident to separating an adherent loop of the small intestine, A. Hofmann ((*Zentralbl. f. Chir.*, 1913, p. 122) resorted to the expedient of attaching a piece of the parietal peritoneum of the size of a "3-mark coin." This free transplantation proved successful, and there was immediate restitution of peristalsis.

MISCELLANEOUS ARTICLES

Hypodermic Iron: A Personal Experience

ON page 763 of the September number of CLINICAL MEDICINE, the Editor, in commenting upon some remarks by Dr. H. O. Wells relative to the use of iron, creosote, and other drugs, says: "There is no doubt that iron given subcutaneously is effective, but the pain and local reaction are often so great as to more than outweigh any advantages over internal medication."

This leads me to give the readers a little experience of my own.

A year ago last February I suffered a very severe hemorrhage, owing to the erosion of a blood-vessel in a duodenal ulcer, and was left practically bloodless. This occurred on the 17th day of February, 1912. The morning of the 20th the surgeon in charge began to administer sterile iron cacodylate, in doses of 1 Cc., this amount carrying 3 grains of the organic iron. The injections were made below and toward the inner aspect of the scapulæ, and, with the exception of a single injection, in which the nurse inadvertantly plunged the needle into the periosteum of the right scapula, I experienced no inconvenience. This happened early in the series of injections, and thereafter I received practically all injections into the left subscapular region. The only inconvenience experienced was that from the introduction of the needle-point, this amounting simply to a prick, and nothing more.

These iron injections were carried along over the period from February 20 to March 22—one month—when I was discharged from the hospital. During the last nine days, owing to the fact that I was out of bed and did not feel like removing my clothing for the afternoon injection, a double dose was administered before I arose in the morning. Even this increased amount had no ill effect.

There was so little local reaction that after an injection I was able to roll over on my back and lie there as contentedly as though nothing had happened. In the one single injection that was followed by any irritation whatever, this was not caused by the iron solution, but came from the injury of the periosteum, so far as we could determine.

The results of the injections were marvelous. When I entered the hospital, February 19, I was so bloodless that it was impossible to determine any ruby lip margin or to note any pinkness in the finger-nails. My blood count was not taken until I had been at the hospital for four or five days, when the reds ran a trifle over three million, or about fifty percent below par. The hemoglobin showed about fifty-five percent. I was operated upon on March 8, at which time the hemoglobin showed about eighty percent. At that time my blood-vessels had begun showing themselves and at times there was a slight flush in my cheeks, my finger-nails had begun to appear a slight pink and the ruby lip margin was determinable. Not only were these improvements appreciable, but I felt the stimulating effects of the iron generally.

For three or four days succeeding the operation the injections were introduced into the lower left abdominal quadrant, and the operation was considerably more painful than were those performed in the subscapular region; but, aside from the added pain of the injections, there was no undesirable local reaction. The pain incident to the needle thrust, while greater, did not linger for any considerable time and never was too severe to interfere with my pastime of reading.

Although a considerable number of doses of iron were administered in this way, there was no interference with any of my normal functions. The bowels did not become constipated, the stomach remained in good shape throughout the time I was under this treatment, and, from this experience, I believe that the subcutaneous use of the organic iron was far preferable to the giving the metal by the mouth, in any form.

The method of injecting was very simple. The iron was received in ampules, in sterile condition. The syringe was sterilized by treatment with alcohol, the needle being

sterilized by means of tincture of iodine. The skin surface at the site of puncture likewise was treated with iodine, both before and after the introduction of the needle. Although I received upwards of fifty injections, there was no inconvenience at any time, barring the one mentioned. And even then there was no abscess formation, but merely a slight inflammation, which subsided quickly; and this was traumatic in character, not septic.

It was suggested that the injections be given intravenously, but, for fear of shock, this was not done. However, from my experience with the iron administered subcutaneously, I believe that it might have been administered by the other method without much, if any, inconvenience. The cacodylate seems to be absorbed quickly and to give prompt general reaction, and, being neutral, does not act as an irritant locally.

The advantages of the use of iron hypodermically are, that thus there is no gastric irritation, no constipation; in fact, none of the objectionable things associated with the use of the drug by the mouth. And, then, there is total absorption of the entire dose, which is not invariably true when this agent is administered internally. Judging from my own case and what I have learned of others of a similar nature, I believe that this form of iron may be employed without fear of disaster, but with the expectation that invariably results, and good ones, will follow.

GEORGE L. SERVOSS.

Gardnerville, Nev.

[Dr. Servoss has given us a beautiful report. Will not others do the same? If iron should be more generally used hypodermatically we want to know it, and we want to know the best form in which to employ it.—ED.]

SCIENTIFIC RESEARCH-CENTERS OF AMERICA

A recent writer has stated with positiveness that the great medical research-centers of the world are in Germany and France. A quarter of a century ago this statement might have passed unchallenged, but today it reflects on the author's limited knowledge of what is being done in our own land.

A few years ago Sir Andrew Clark, of London, while on a visit to this country, declared that the scientific medical centers of original work would be located in America, and that in the near future medical men would come here for instruction and knowledge of the most advanced work in medicine and surgery.

This prediction already is becoming a reality in many directions and along lines that the physicians in this country have not yet recognized, because of their proximity. Much of the research in the Carnegie Laboratory, in the Rockerfeller Institute and in Johns Hopkins Hospital is far beyond anything known elsewhere in the world and has already startled the medical men abroad with the possibilities of future attainments.

In the surgical field, the clinic of the Mayo brothers has attracted surgeons, in yearly increasing numbers, from all over the world. Surgical clinics in Chicago and New York are doing fine original work, and are watched with the greatest of eagerness. Other large cities have clinics that are following, confirming, outlining, original paths. A study of the foreign literature indicates how closely many of these new fields are being followed.

There is a clinic at Battle Creek, Michigan, where the treatment of internal diseases by modern methods is made a great specialty. Here, in a great hotel-sanitorium, an increasing number of physicians is constantly in attendance as students and patients, observing and testing the most advanced appliances of hydropathy, electricity, and nutrition.

The Battle Creek Sanitarium has become a great American health-resort, equal to that of any of the famous springs of Europe, only along American lines of independent research and application of means and measures that are new. Next to the Mayos' clinic, with its army of surgeons, the Battle Creek clinic attracts the largest crowd of health seekers and students of modern medicine.

There are other institutions following the same lines, but none of them on so large a scale with exact scientific means and appliances, conducted by enthusiastic workers. The prediction of Sir Andrew Clark is being fulfilled, and physicians who are traveling abroad, looking for the most advanced work and study, come back with a conviction that much of the great world's work is being done here. The most independent students, thinkers, and writers are pressing out into the unknown, marking out new realms.

In psychological medicine, there are clinics and observation hospitals for the study of mental cases, far beyond anything seen abroad. Special studies are being made and the cumulating facts point out new and wider fields that fascinate the student of science and promise much for the future.

The late Dr. Draper, of New York, used to repeat in his lectures that in the coming time America would attract scientific students of the world and that the research-work done here would far exceed anything accomplished elsewhere; that the conditions were more favorable and the students more alert, and the Americans as a whole were more ready to apply and make practical the great truths of science.

From a personal knowledge I can assert that the surgical clinics at Rochester, Chicago, New York, and other cities are marvels of scientific technic in diagnosis, operations, and results.

The clinic at Battle Creek is equally startling in the scientific application of the great principles of therapeutic measures, so commonly known and so illy applied in the cure and prevention of disease. Persons who would know what is being done along the frontiers of science should make themselves acquainted with the work done in this country, before going abroad, and particularly before condemning our work here and praising that of other countries.

T. D. Crothers.

Hartford, Conn.

REMINISCENCES OF AN EX-GALENIC

Being in a reminiscent mood this evening, I thought that some of my experiences possibly might be worth setting down, for the benefit or edification of readers of Clinical Medicine.

Away back in 1891, while still the odor of the college was fresh upon me, I was located in a little town in the northern part of Nebraska, and four miles to the east there was another little town with its doctor. This other doctor we will call Dr. East, and he, despite this fictitious name, if he still is alive and reads this, will remember the occurrence.

Just a few days previous to the time of this episode a representative of a certain manufacturing firm of galenicals had passed through that section and left with each of the doctor's samples of their "plunder" (excuse the appellation), and among them were samples of fluid extract of ergot and the fluid extract of aconite.

Well, away in the night I received a call to come quickly, to help Dr. East in a case of threatened abortion. When I arrived I found a woman on the verge of collapse, and a decidedly nervous doctor sitting by the bed. I soon learned that there was alarming hemorrhage, to check which the doctor had given (as he supposed) three teaspoonfuls of the sample of the fluid extract of ergot just presented to him; however, observing some grave symptoms, he had stopped with the third dose. I picked up the bottle, to see how much of the ergot was left, when, lo! in letters as big as a barn, it seemed to me, I saw the word ACONITE. My hair raised up on end. I passed the bottle to Dr. East, and if he is dead, his face was no whiter in his coffin that it looked when he read that label.

Think of it—three full teaspoonfuls of fluid extract of aconite given in quick succession to a woman weighing less than 100 pounds! That she still was alive, one hour and one-half afterward, was a marvel. Well, we got busy and the woman pulled through, all right, and some months afterward I delivered her of a baby.

Now, had that been the equivalent in *aconitine* two lives would have been lost.

Moral: Galenicals are often quite safe even in careless hands!

Here is another. This time I was surgeon for a large coal mining concern in central Wyoming. I received a rush-call to see the wife of one of the miners, a strong young woman, 20 years old. She was only semi-conscious when I arrived and had frequent shivering-spells, with drawing back of the head and eyes upturned.

Inquiring what she had eaten, I was told that she had partaken of but very little for four days. Palpation indicated that she had a rather full stomach, and I then learned that four days ago she had eaten heartily of a boiled dinner. By the use of the hypodermic syringe loaded with some apomorphine, the boiled dinner was returned to the outer world, just as it had been swallowed; and it even was not fermenting after this four days' sojourn in her stomach.

Next case. On July 4, Mrs. A., Lincoln, Nebraska, was taken sick with symptoms very like the ones described above, and suffered until the 15th of the same month, when I was called in. I learned that on the 27th of June she had eaten a boiled dinner, and since then had eaten very little. Here, also, the hypodermic syringe with its complement of apomorphine relieved her of the gorge in eleven minutes and, in this case also, neither was the food fermented nor had it started to digest, but appeared the same as when swallowed. It was imperfectly chewed. Complete relief followed.

One more experience. A man in Creston, Iowa, about 35 years old, said he had been feeling bad all spring. The patient, when

seen on April 25, complained of frequent attacks of smothering, shaky, drawing spells during several months past. Two days after my first visit he vomited the pulp of oranges he ate between Christmas and New Year's day. Bad symptoms ceased.

Will some one please tell me how long food can stay in the human stomach without fermenting, digesting, or killing the patient?

WILL K. JOHNSON.

Piqua, Kan.

NEOSHO: THE OZARKS

All my life I have heard about the Ozarks. Those who live there seem to love them with the love of the mountaineer; the climate, productions, people, all are depicted with the enthusiasm of the Alpine dweller, whose pent-up emotion finds utterance in such bursts of emotion as Tell's "Ye crags and peaks—I'm with you once again!"

Accordingly, when we left St. Louis on the Frisco, it was with the pleasant expectation of a long wished-for experience. We would let the gusts sweep round us as we clung to the mountain cliff, draw it in with full breath and cry aloud, "Blow on, ye gusts. This is the land of liberty!"

By and by we passed Springfield and as yet had sighted no snow-clad peaks. Anxiously I inquired of neighbor passengers for the non-materializing Ozarks and was told that we were in their midst! Consulting my folder, I found that the elevations along the line ran between 1200 and 1700 feet. "Some high up," proudly announced a native. The country was rolling, without an acre too steep for the plow, pretty evenly divided between cultivated fields, mainly corn, and woodland, which was mainly oaks not over fifty feet in height. If there were ever much heavier timber, it has been cut off and the stumps have disappeared.

The soil is a red earth, plentifully plummed with stones; no soil at all being visible in many places—just stones. These are not water-smoothed cobbles or glacial drift, but apparently rock outcropping, and these shattered into angular fragments by the action of frost. Yet, in places where the plow had passed solely through stones, no soil appearing, there were stands of corn yielding 30 or 40 bushels to the acre. Yes, corn stood there 12 feet high, and well eared.

Whatever grows here, grows strong. A great fruit country it should be, and the Ozark apples and melons carry off the prizes in competitions everywhere. Yet, we see few orchards decently cared for, and fewer grapes. The famous Ozark melons are unknown at Neosho; the apples are unfit for sale, the grape vines are unpruned; the melons come from Iowa, plums from Idaho, grapes from California.

Today, September 24, we have had a week when woolen underwear has been comfortable and guests gather about the hotel stove evenings. The temperature in winter, I learn, goes below zero some 10 to 20 degrees—one man said 35 below; but I set him down as a humorist.

All about are developments of mineral wealth: Joplin, with its zinc and lead, Tulsa and other towns, with petroleum. A chunk of pure silver was picked up on the Moore tract, in the southern part of this country. Lead and zinc are found in traces almost everywhere; and as fast as one group of mines is exhausted another is discovered. Nobody likes to part with wild land, for he may be letting a fortune slip through his fingers.

The people—the old American stock, with scarcely a trace of admixture. One Greek candy-shop is the only foreign element I have discovered. Negroes seem scarce, although I am told there are some near the depot. The men are fair, with gray eyes, and usually show a questioning, chip-on-the-shoulder demeanor. Were I to recruit a company for warlike emprise, I should come here for men, sure of finding a superabundance of the best material on this broad earth, men who can ride and shoot and would welcome the call of fife and drum.

The land is backward, because the people have drifted—but make no mistake, these men have the highest possibilities in them of the true Anglo-Saxon breed. Some Illinois farmers of like stock have settled here, and their farms demonstrate what may be done with Ozark soils. The natives around them show what the incentive of example and competition can accomplish—give them the dare, and Illinois has to extend himself to keep even.

Saturday the farmers drive in and hitch about the court-house while they stop. What scenes for a kodak! Here is a scrawny old darkey on a little old ramshackle wagon, loaded with weeds, drawn by a pair of burros the size of mastiffs, their harness a patchwork of bits of rope that would hardly be received except as a "make-up." A similar wagon has six children under 8 years of age, the girls in wonderful pink sunbonnets, the others populating every corner of the

wagon, the mother holding a team of little ponies and calmly smoking a long-stemmed pipe.

The town possesses wealth and culture. Scarcely a building needs fresh paint. Many bungalows and other houses are built of strictly modern design, the use of the native stone being common and especially artistic. From one small cottage come the strains of a fine piano, the Spring Song rendered with commendable expression.

The glory of Neosho is its springs. One hotel is the Spring City, our own is the Big Spring Inn. This big spring affords three million gallons daily; and there are others. An artesian well in the court-house yard flows constantly, the water being 99.98 per-cent pure. Two sulphur springs also are here; but otherwise the water is just pure water. And this is its greatest recommendation.

Some mineral waters are purgative, others are astringent, some are chalybeate, lithic, calcic, etc. Each of them is useful in certain conditions, harmful in others. However, these pure waters of Neosho hurt nobody, and have a value, in many affections, as water alone. Here is a lady who came to this place from Boston ten years ago, to die of Bright's disease. She has kept her body well washed out by the free use of this water, and is not dead yet—or in any near peril, if one may judge by her looks and activity. Here are people with rheumatism, digestive troubles, pyelitis, valvular cardia, and other complaints. All seem to do well. I have not heard of one who has been harmed by the water here. And, yet, it is just water.

A few miles south lies a group of springs—Indian Springs. Twenty-five years ago there was a hotel, with barber-shop, stores, a hotel dealer, and a fair patronage. Today all these have disappeared, and the land is a poor, rocky farm. The springs alone remain. Within ten feet three springs well out of the cliff, each of a different taste and temperature. Several others are within a few feet. Near Neosho there are several places at which something having the appearance of crude petroleum exudes from the ground.

The town is well located, has three railroads, with good farming land around, and beautiful scenery. It is the county-seat of Newton County, and has the culture usual to country towns, which enjoy, in judges, lawyers, and so on, a nucleus of educated men. There are no saloons in the county, and in our two weeks' stay I have witnessed no drunkenness or disorder. The town is supplied with pure water from huge springs; it boasts eleven churches, four banks, good schools, a low death rate, and a population of over 4000.

Neosho is ripe for development. School census: 27 teachers, 1,762 pupils. Tax valuation: $1,083,560 (about 1-3 value); tax rate, $1.97, for state and county, of which $1.20 is for schools. Strawberries form the best crop, with apples second.

I leave the Ozarks with false ideals corrected, but with new interest in this lovely country and its fine people.

W. F. Waugh.

Neosho, Mo.

DR. LYDSTON WINS HIS SUIT AGAINST THE A. M. A.

We have just learned that the Court of Appeals of Illinois has reversed the decision of the lower court in Dr. G. Frank Lydston's suit against the trustees of the American Medical Association. It seems to be the opinion of the Appellate Court that the A. M. A. is holding meetings contrary to law, that its elections and delegate system are illegal, and that every member is entitled to a direct vote.

Unless this decision is reversed by the Supreme Court this means that for fifteen years the A. M. A. has been doing business illegally; and a complete reorganization will be necessary, this time on a thoroughly democratic basis. It seems that Dr. Lydston succeeded in getting in the courts an audience which he could not get elsewhere. Events crowd one another. What next?

SOME EASILY MADE LABORATORY TESTS

Many of the laboratory tests in diagnosis are so difficult or require so much special apparatus that the general practitioner does not undertake them himself; but this is not so with all of them. Any physician can, and most physicians do, use many of these tests with very limited apparatus.

The hemoglobin test requires but a minute. A Tallquist scale (and book) costs but little and lasts several years. Treatment of a chronic or subacute condition should not be undertaken without knowing the state of the blood, and then watching to see whether improvement follows or not. The Tallquist test does not displace the microscopic and the differential count, but supplements these.

In most of the chronic cases the blood contains only 70 to 80 percent hemoglobin. Give these patients one or two triple arsenate granules after meals and keep the intestinal tract clean; then see how quickly the hemoglobin will increase.

The Harrower test for total acids in the urine should be applied in nearly every case that comes to the physician. The total acids usually vary from 20 to 150, on the scale, 35 to 45 being considered normal. Without the test, it is only guesswork. No matter what the disease is, the total urinary acids should be definitely known. If the amount is high, the patient likely has fermentation in the intestinal tract. "Clean out, clean up, and keep clean."

If the system is highly acid, the oxygen-carrying power of the red cells is limited, also the defensive powers of the white cells is lowered. Such persons "take cold" very readily and conditions are favorable for many chronic ailments. Bring the total acids in the urine down to normal, and any other treatment you may need to give will be much more effective.

Indican will be found in the urine of nearly all people who are ill enough to come to the physician. The color reaction will vary from a trace to a deep-blue or nearly black, according to the percentage present. Look for a septic process somewhere, or more often for putrefaction (proteid decomposition) in the bowel. The test for indican with chloroform and Obermayer's reagent is so simple that it requires little time or skill to make.

The blood pressure should always be ascertained in chronic ailments, and in many acute diseases as well. A standard mercury instrument should be used, so that the result may be compared with the observations of other physicians; and the mercury instruments are considered the most accurate. There will be many surprises coming to the novice in this field. Blood pressure will vary a great deal in different people; to try to estimate it by feeling the pulse is very uncertain. Ordinary office patients will show a variation of from 100 to 200 mm. mercury, and, still, not appear to be very sick, at these extremes. A diagnosis usually cannot be made from the blood pressure alone, but it will assist in discovering early stages of chronic diseases of the cardiac valvular system and of the kidneys, and which otherwise might be unsuspected until uncurable.

A study of the blood pressure opens up a large field and illuminates many heretofore dark places. Much further research is due on this subject, but every progressive physician should be making observations and utilize, for the benefit of his patients, the great amount of work already done in this direction. Any of these tests is just as important as is the use of the clinical thermometer, and proficiency is easily acquired by any physician. Now a few illustrative cases:

Mr. E., age 35, has been sick about four months. Had been treated by a physician for "articular rheumatism." Personal history negative until he had an attack of grip, with a sore throat for months before his joints became inflamed.

Mr. B., age 70, has been sick for three weeks and bedfast for ten days. Had been under treatment for "rheumatism;" was suffering greatly. Temperature 102° F. As only one joint was involved, local infection was considered; later, a tuberculin test showed positive. In the meantime the urine test showed indican in large amount; total acidity, 90. The patient was badly constipated. Under the clean-out plan and a course of sodoxylin the patient improved about 50 percent in the next two weeks. (But the knee was kept in a plaster case for several months.) Note that, while the cleaning out of the indican and excess acids did not cure the patient, he was much improved when this had been accomplished. Now (two years later) he has a fairly good leg, except for a little stiffness.

Mr. G., age 50 years, comes for treatment for headache, the last attack, a few days ago, lasting three days. The patient looks strong and robust. Physical examination, negative. Blood pressure equalled 200 mm. mercury. Urine test: total acids, 70; indican present; a trace of albumin. The patient still is under treatment; too soon to give result. Blood pressure, 190 mm. Hg. Total urinary acids, 50; indican, a trace; albumin, a trace. Headaches are nearly gone. Sodoxylin was given, and a laxative tablet of calomel and phenolphthalein. It is difficult to get the patient to report; he thinks he is nearly well.

The joint trouble came later. Temperature, 101° to 102° F. evenings; pulse, 120. Joints are quite tender, but the patient was able to sit up. Physical examination, negative, except for hepatic dulness extending higher than normal and spleen was enlarged and tender. Urine test, negative. (I was not using total-acid and indican tests at that time.) Hemoglobin test, 30 percent. He had taken much salicylates, but without benefit.

After a month on triple arsenates with nuclein, and calomel for the bowels, the joints became well in two months. The hemoglobin test was 70 percent; it did not rise higher. Six months later he had a very bad sore throat, but was able to be up and around. The throat ulcerated badly. Another physician had a Wassermann test made at that time, which was negative. His throat finally healed, but he did not gain much strength and died within a year. He had gone south for the winter, because the cold weather affected him so much. The diagnosis made before his death was pernicious anemia.

Without the Tallquist scale I should never have suspected his hemoglobin to be so low. This would have been an interesting case for a complete laboratory diagnosis.

M. F. MINTHORN.

Castana, Iowa.

[We want to say "amen" to Dr. Minthorn's little talk about using the laboratory methods. In these days, no doctor can be really half-way successful who does not make these tests himself or have them made for him. We want to hammer that into the consciousness of every doctor—and we are trying to do this. Accurate diagnosis goes hand in hand with accurate therapy. One complements the other. To diagnose, and then fail to exhaust every effort to treat the patient successfully is a crime. So is it to try to "treat" without knowing the nature of your patient's disorder. There is more than mere "success" involved in this matter—there is a moral responsibility. Read the papers by Dr. Austin and Dr. Williams in this issue. Read them carefully. Then let's all of us "get busy."—ED.]

DRUG HABITS AND DISPENSING DOCTORS

I see the retail druggists of the N. A. R. D. are at us once more. At their convention at Cincinnati, the delegates went on record as favoring a federal law controlling the sale of narcotics and poisons, claiming that dispensing physicians are allowed to sell the same without legal restraint, and that this is a source of great harm.

Now, we know the retail druggists have not the welfare of the people solely at heart when they evolve schemes of this nature—it is the dispensing physician whom they have in mind. The purpose for their action is, to force dispensing physicians to prescribe and thus to increase their own business; in other words, it is pure commercialism with them.

I do not think I should be wrong in stating that any harm committed is entirely on their part, and not due to dispensing doctors at all. Who of the medical profession does not know of druggists who are daily selling morphine, cocaine, and the like, to their customers? Those unhappy creatures, the slaves of dope, are served with various amounts of these substances at a time, and, once known, they can readily obtain more whenever wanted. In the face of this, these sellers of drugs have the hardihood—a large percentage of them—to demand that dispensing physicians be restrained from dispensing narcotics.

I do not know a dispensing doctor, nor do I think that one exists, who sells habit-drugs by the dime's or quarter's worth. More than that, they do not sell such narcotics at all; they administer them when necessary, and when needed they are, of course, included in the prescription. But as to selling such drugs in the way the druggists infer, never—no, never! Such a physician would be shunned and condemned by every decent doctor in America.

And, again, were it not for druggists selling narcotic drugs, we should have no drug-fiends; because they would be unable to procure them, unless it would be now and then through some wayward druggist or physician, the latter being the only persons able to procure them.

But it is plain why they are attempting to do this thing: it is to get prescriptions from those who now are dispensing their own drugs; a thing, though, they will never accomplish, for the reason that these same doctors dispense, not principally for profit, but for other very good reasons, one of which is that they cannot always rely upon strict adherence to the prescription, and also because the dispensing doctor usually is a good man with a heart, a man of sympathy, who knows the economic burden which sickness involves.

And, furthermore, a dispensing doctor can, many times, administer the necessary drugs (in cases of great urgency) and watch results before leaving the bedside. Whereas, if he prescribed, it would be from one-half to three or more hours before the patient could receive a dose of the medicine—time enough elapsing to change the condition of the patient, time enough, often, to render the chances hopeless; whereas, if the proper remedies had been

administered at the proper time the patient would have been saved.

Thus, for numerous reasons, not forgetting the good of humanity, the dispensing doctor should be preferred.

R. WILLMAN.

St. Joseph, Mo.

[As to whether any doctor should dispense or prescribe we do not undertake to say. This is a question which every doctor must answer for himself—and we can safely leave it to the average physician to answer it honestly and conscientiously. His location; the character of the druggists upon whom he must depend; the financial status of the people among whom he must practice; the character of his professional competition; the custom of other doctors as regards dispensing or prescribing; the proportion of town and country practice—all these things, and many others, must be considered

The one factor, however, which should always be kept in mind, is his duty to his patients. This should be placed above everything. If he can serve the sick best by dispensing—and he often can—let him dispense; if he can get best results by prescribing—and frequently he can—then he should prescribe. But—*nobody can decide this matter for him but himself.* Certainly the druggist cannot. It is for this reason that every doctor with red blood in his veins should resent and oppose the efforts of any man or any class of men to tie his hands, interfere with his professional liberties, and by so doing limit his power to do good. Whether *you*, doctor, dispense or prescribe, you must see that this is so. The whole medical profession should be a unit in defending this principle. Far more is involved than the lessening dollars for the doctor and the increase of profits for the pharmacist.

Right now there is a bill pending in Congress (H. R. 6282) to restrict the sale of narcotic drugs. It is a good bill; it was passed by the House of Representatives; it has been indorsed by all branches of the drug trade, by the official representatives of the A. M. A., by the veterinarians, and by the administration. It was opposed by the N. A. R. D. at its Cincinnati meeting *principally* because it did not put oppressive burdens upon the dispensing doctor.

Are you doing all that you can to secure the passage of this bill? Have you written to your representatives and senators urging its immediate consideration by the Senate, just as it stands? If you have not done so, attend to the matter at once. The bill the druggists are endeavoring to have passed would deal you a terrific blow if it became law. What are you going to do about it? Nothing?—ED.]

DEATH OF DOCTOR WILLIAM J. BRADLEY

We regret greatly to learn of the decease of Dr. William J. Bradley, of Cedar Rapids, Iowa, who died of typhoid fever on October 2. Dr. Bradley was born in Berrien County, Michigan, in 1866, graduated from Rush Medical College in 1890, and after practicing in Illinois for several years, located in Cedar Rapids in 1902, where he built up a large practice. He was a warm friend of the active-principle movement in Iowa, and left a horde of friends to mourn his loss.

HOW TO SECURE RELIABLE DRUGS

While we are discussing the right of the physician to dispense or prescribe, as he may prefer, it will be interesting to read the following letter which was published in *The Journal of the American Medical Association*, October 11, 1913, on page 1392. Dr. Howe has presented this matter clearly and impartially and in a way which we are sure must appeal to every fair-minded man. His position is our own exactly.

To the Editor:—The recent article by M. I. Wilbert on "Carelessness in Pharmacy as a Reason for a Restricted Materia Medica" (*The Journal*, July 19, 1913, p. 189), very truly sets forth the complications and drawbacks incidental to the evolution of the modern drug-store. As a general emporium for all sorts of small wares and ready-made medicines, for confectionery, cigars and fancy articles, it may be a social necessity as stated, and undoubtedly is so. With the further elaborations of the soda-fountain, the tables for ice-cream customers and the great amount of profit secured along these lines, it is no wonder that the careful compounding of pure drugs should be the smallest element of the business and consequently become neglected.

Mr. Wilbert in his article suggests reform of the drug-store, but specifies shops devoid of "side lines" and equipped with the necessary analytical apparatus. A few such shops still exist in the large cities, but they are so distinctly in the minority that they can exercise but little influence to benefit the general public. The attractive profits of the "side lines," are so great that they carry almost all druggists with them, and, so far as I can judge, the careful handling of drugs is more and more neglected.

A further difficulty arises from the fact that a drug-store supplying the patients of a number of physicians has to include in its stock the favorite

drugs and combinations prescribed by each of them—some of these rarely called for. With our large pharmacopeia and the great variety of products of the manufacturing chemists, to say nothing of the legion of nostrums, the druggist may well feel bewildered.

The suggestion of Mr. Wilbert that physicians should "take an active interest in evolving a restricted or preferred materia medica list" is certainly desirable; but when one druggist serves a half dozen or more physicians, it may be rather difficult to get them all to keep step in this movement.

Altogether, it must be confessed, the preoccupation of the druggist with his so-called "side-lines" and the demoralization of the trade and the public with nostrums make the reform of his business exceedingly difficult. Doubtless it can be accomplished in certain instances under the personal influence and direct supervision of the physician, but in other cases it is practically impossible.

This condition of things is particularly unfortunate for the physician. He is responsible for the life and welfare of the patient and many times pins his faith on the activity of a single medicine. Should this remedy be unreliable or wrongly compounded, or should successive fillings of the prescription vary in activity, both the physician and the patient may suffer.

The matter of reliable drugs is so extremely important that any physician who is unable to obtain satisfactory service from druggists in his neighborhood is justified in supplying his own drugs.

More than twenty years ago I was in the position which I have just indicated, and in justice to my patients adopted the method of providing and dispensing my own medicines. Although I began this with many misgivings, it has worked exceedingly well. Carefully choosing the sources of my drugs and repeatedly testing their clinical efficacy, I can expect definite results from them. The patient gets the first dose promptly, usually before my visit is ended. Thus many uncertainties are avoided. The practice of dispensing does away with the unauthorized refilling of prescriptions and with the annoying habit which many patients have of lending them to their friends. The time required to keep my stock in order is not so great as I supposed it would be. It proves to be well spent, for it is closely interwoven with the art of medicine, in that it familiarizes me with the appearance, taste and other physical properties of my remedies. The expense in my hands has never exceeded 3 percent of my total receipts from practice. The method produces the greatest economy of material and of expense. It is interesting to find, after twenty years' use, that dispensing medicines has not led me to resort to the use of the ready-made nostrums or "shot-gun" formulas. Examination of my hand-bag today shows that out of sixty-three medicines which I habitually carry, forty-seven contain only a single ingredient. The use of alkaloids and of the tablet form of medication greatly facilitates the carrying of medicines, and many tablets can be dissolved and given in liquid form if desired.

I do not wish to be understood as advocating that all physicians should dispense their medicines. Such a course would be unjust to some druggists. The well-equipped and conscientious druggist who has a high standard of work and lives up to it should be encouraged. On the other hand, I firmly maintain that no physician should jeopardize his patients or his own reputation by relying on a prescription service which he knows to be poor. He should, if necessary, provide and dispense his own medicines.

OLIVER H. HOWE, M. D.
Cohasset, Mass.

SODIUM HYPOSULPHITE IN THE TREATMENT OF HEMORRHAGIC MALARIAL FEVER

I am delighted to read in CLINICAL MEDICINE Dr. Johnson's very interesting article on sodium hyposulphite. I have long regarded it as one of our most useful drugs and a real boon to one practising in the land of malaria and the "yellow janders." Dr. Johnson calls for the experience of his medical brothers, and I will give mine.

Over ten years ago, I was called to a case of hemorrhagic malarial fever. I instituted the treatment given in THE ALKALOIDAL CLINIC by an old practitioner living in the bottom lands of Louisiana, where the disease was very prevalent. Being remote from any town or other M. D.s, he was thrown on his own resources, and he developed this treatment, and found that it met all the urgent demands of numerous cases. He was of the opinion that the malaria-poison had "knocked out" the action of the liver, the bowels, and the skin, and that their work had been put vicariously upon the kidneys; and these organs, in their effort to perform this quadruple work of secretion and elimination, were so severely taxed and overworked as to produce the hemorrhage that gives the distinctive name and character to this dreaded fever.

This old doctor summarized his treatment and condensed its principle into these forceful words, "Flood the sewerage;" and to this end, he recommended the giving of calomel, podophyllin, jalap, and leptandrin, a combination of four of our very best chologog cathartics, then to follow with tablespoonful doses of a saturated solution of hyposulphite of sodium every three hours to brisk purgation. To check the hematuria, spirit of nitrous ether, 1 dram, and oil of turpentine, 20 drops, were given, in water. This dose to be repeated according to circumstances—*pro re nata*. This treatment gave me the most entirely satisfactory results of any that I ever gleaned from a medical journal.

According to the father, my patient voided a gallon of bile by vomiting and by stool. I continued the hyposulphite for several days, although improvement was rapid from the first day. The hematuria promptly

ceased and the chills and lemon-jaundiced hue disappeared. The hyposulphite acted in the most entirely satisfactory manner, and took the place, and filled the office, of quinine.

This Louisianian asserted that quinine would increase and aggravate the hematuria, and that the hyposulphite would destroy the malarial parasite as effectively as quinine, without disturbing the function of the kidneys.

So thoroughly was I myself convinced of this fact of the pernicious effects of quinine, both from previous abundant gleanings from writers in medical journals as well as from the relations of practical bedside experience of physicians of my own acquaintance, that I did not venture to give this patient any quinine for three days, and then only in small doses.

Then, under the use of quinine, iron, arsenic, strychnine, and hypophosphites, I had the great pleasure of seeing my patient restored to rosy, robust health, which he has continued to enjoy to this day. I sent him out of the malarial belt as soon as convalescent, and I think it is the right thing always to do in these cases.

Since this experience, I have frequently prescribed sodium hyposulphite for the sallow, semijaundiced condition of the subjects of chronic malaria, associated with anemia, puffed bowels, debility, and listlessness, and with very excellent results. In giving it, I had these three points in view: (1) That it will destroy the malarial parasite in the blood. (2) That it will act on the liver and the bowels. (3) That it will act as an antifermentive and also as an antitoxin.

Locally, sodium hyposulphite is a valuable application to soothe and relieve skin eruptions.

But, as Dr. Johnson says, the salt has a most disagreeable taste, and on this account it is difficult to get patients to take it. One of my lady patients almost exhausted her vocabulary of adjectives to describe how vile it tasted to her; but I have never known one who had a more sensitive perception of taste of the disagreeable than she. The most of my patients have not rebelled against it. I heartily join Dr. Johnson in his wish that some wizard of a pharmacist will soon give us a palatable form for dispensing this very valuable drug.

Dr. Sparkman, of Georgetown, South Carolina, uses the hyposulphite very successfully in hemorrhagic malarial fever and exhibits it in solution in cinnamon water. I do hope some may have tested as to whether calcium sulphide is equally as effective and can be substituted for the hyposulphite.

Let me add—do not accept the advice, "Don't give calomel, in hemorrhagic malarial fever, but give quinine." Reverse this, and you will be right. Quiet the patient with a hypodermic injection of morphine, and give calomel in 20-grain doses every two hours till the bowels act freely. In addition, support the vital powers. The hemorrhage will cease when the liver acts fully.

L. B. Bates.

St. Matthews, S. C.

THOSE PRIZES: A WORD OF EXPLANATION

In the June number of Clinical Medicine we offered several small prizes, ranging from $3.00 downward, for the best brief therapeutic articles or "items" upon the treatment of the summer diseases. Doubtless many of you will wonder why we have failed to make any awards as yet. The reason is that we have *not* the wisdom of Solomon. If we exclude the longer articles (which should properly be excluded from the competition) there is no possibility of making a choice from the expressions of opinion sent us from our subscribers. As the easiest way out of a difficulty we have, accordingly, advanced the subscription of every contributor to this symposium who has made a good showing—as most of the contributors most assuredly have. The writers of the leading articles were not considered eligible to the competition.

Without regard to prizes won't every interested reader of this item now "get busy" with something therapeutic to help us all in our struggle with winter-month diseases? Here are a few good subjects:

Whooping cough.

Senile bronchitis.

Rheumatoid arthritis.

Rheumatism—acute or chronic.

Coughs—all kinds.

Sore throats—not forgetting diphtheria and croup.

Measles, scarlatina, and other eruptive diseases.

Asthma. (We want more about asthma; it's a puzzler.)

Influenza.

If you do not like these titles pick out something that suits you better. But write about something you know; make your talk a practical one, thinking of the other fellow;

and "cut it short." We need more of this brief, pointed, pithy stuff. Brother, you can help. Are you doing *your* share?

NERVE ANASTOMOSIS (THE MUSCULOSPIRAL NERVE)*

The patient to be operated upon today is the man who came before the class yesterday; a Frenchman who suffered a very severe accident on August 2 of last year. While he was attempting to place a belt on a wheel the latter began revolving at the rate of 300 revolutions per minute. The belt caught in the set-screw and entangled both arms of the patient in such a manner as to mutilate the right one, necessitating an amputation four inches below the shoulder; the left presenting an oblique and longitudinal fracture of the humerus. It is now three months since the accident occurred and we find his arm is practically useless because of musculospiral paralysis, the nerve having been encased in the bony lesion. The object of the operation is to restore the function of the arm.

Before the patient is brought into the operating room, let us discuss briefly the anatomy and physiology of the musculospiral nerve. You will recall that it is one of the terminal branches of the posterior cord of the brachial plexus, receiving its fibers from the sixth, seventh, and eighth cervicles. After passing behind the axillary artery and in front of the latissimus dorsi and teres major, it enters the musculospiral groove, passing around the humerus between the inner and outer heads of the triceps. When it reaches the lateral aspect of the arm, it passes between the brachialis anticus and the brachioradialis, dividing into radial and posterior interosseus on the front of the external condyle. Before the nerve divides into its terminal branches it gives off the internal muscular branches to the inner and middle heads of the triceps; the posterior muscular, to the triceps and anconeus; the external muscular, to the brachioradialis, extensor carpi radialis longior, and outer part of brachialis anticus. It also gives off an internal cutaneous branch to the posterior aspect of the inner half of the arm and a cutaneous branch to the posterior surface of the radial half of the forearm as far as the wrist. The musculospiral supplies the extensors and supinators of the forearm wrist, and phalanges.

What are the points of interest in this case that will enable us definitely to locate the lesion? By bringing the forearm down beyond a right angle, there is slight power of extension. Supination, when the arm is extended, is entirely lost; slight supination, when the arm is flexed. The patient also exhibits complete wristdrop, with loss of extension in the phalanges. Sensation on the posterior aspect of the arm is normal. There is hypersensitiveness over the outer half of the posterior surface of the forearm, which indicates neuritis. There is also complete loss of sensation over the distribution of the radial nerve.

Now let us locate the lesion. He has slight extension of forearm and unimpaired sensation on the posterior aspect of the inner half of the arm, because the lesion is below the point from which these structures receive their nerve supply. The lesion is also below the origin of the nerve to the posterior surface of the outer half of the forearm. Sensation over this area is not lost, on the contrary, it is hypersensitive. The nerve is caught above the branches to the supinators, because the function of these muscles is destroyed. When the arm is flexed, the patient exhibits slight supination, because in that position the biceps performs this function and it is supplied by the musculocutaneous nerve. Thus we are able to locate definitely the lesion between the internal muscular and cutaneous branches above the elbow and the bifurcation of the main trunk into the radial and posterior interosseus.

I am now making an incision along the inner border of the brachioradialis muscle. The white line now comes into view. It is the intermuscular septum between the brachioradialis and the brachialis anticus. With the handle of the knife I am separating these muscles. At the bottom of this septum the nerve should come into view, but it does not. I will now lengthen my incision above and below this bony enlargement and search for the points of entrance and exit of the nerve. Here is the nerve entering the bone some distance above the external condyle.

We will now chisel away the bone to see what has become of the nerve. This enlargement is very hard; I expected to find it somewhat softer. The nerve seems to be destroyed soon after entering the bone. It will be necessary to fill in a gap of two inches where there is no nerve-substance. Passing the blade of my knife throught the center of the proximal portion, about one-eighth of an inch from the distal end, I divide the nerve longitudinally for more than two inches. We will now reverse this segment and suture it

*Clinic given before the students of the American Medical College, Shanghai.

with fine silk to the distal portion just above the radial and posterior interosseus.

Now you may see that I have carried the nerve away from the bone and am suturing muscle and facia under t. I do this in order that the nerve may not again be encased during the process of repair. Before I close the skin incision, you may see that the nerve instead of running through the groove, next to the bone, is practically subcutaneous. We shall now put this arm in a right-angle splint, leave it for four weeks, then give it passive motion and massage.

What is the prognosis in this case? We expect to have a complete restoration of function. It has been demonstrated to the satisfaction of the profession that the function of a divided nerve can be completely restored, even though it has been separated for a long period of time.

But we must not overlook the factors so essential to success, namely, it must be one of those nerves that possesses a regenerative membrane, the neurolemma. The axis-cylinders must be accurately adjusted without the interposition of connecting tissue. We must have perfect asepsis.

The foregoing repeats the remarks made at the surgical clinic held November 12, 1912, in the presence of the students of the Medical Department of the National University.

On January 28, about three months after the operation, the patient again appeared before the class. Sensation over the affected area was entirely restored. Extension and supination of the forearm were complete. There was no wristdrop. Extension of the fingers was still slightly impaired, but rapidly improving. This case illustrates the rapid regeneration which takes place in a cerebrospinal nerve.

J. D. HAYWARD.

St. Louis, Mo.

DEATH OF DR. TORGNY ANDERSON

Many of the old subscribers to CLINICAL MEDICINE will remember Dr. Torgny Anderson, a Nebraska reader of this journal, who from time to time contributed some clever cartoons on medical subjects. Several years ago he lost a foot through the explosion of a gun and his health was completely shattered. He returned to his native country, Sweden, and died there on September 19, last. He was an able man, a warm friend of the alkaloidal movement, and a devoted reader and, contributor to the old CLINIC. We extend our earnest sympathy to his family and friends.

Is there a medical journal in the world which is as rich in its friends as ours? We believe not—and we are earnestly trying to deserve them.

IODINE: A FINE SERIES OF PAPERS

The Medical Standard, in its October issue, has an interesting symposium on "Iodine," appearing in its Round Table Department. Every reader of CLINICAL MEDICINE should see this number. Send ten cents for a copy to *The Medical Standard*, 535 S. Clark St., Chicago, Illinois.

COPPER SULPHOCARBOLATE: REPORT OF CASE

On Friday evening, September 5, 1913, I was called to attend a baby-girl—19 months old. Her pulse, I found, ran 120, her temperature was 104° F., the abdomen was distended and tender, and she was passing green, ill-smelling stools in which there was much blood and many shreds of mucous membrane. The child had been under the care of another doctor for nine days, and he had prescribed equal parts of castor and olive oil, every other night, and morphine or other opiates between times.

I began administering calomel with aromatics immediately and followed with copper sulphocarbolate, 1-64 grain in solution at hourly intervals. Nothing else was given, except cold sponge-baths, to allay the fever; and they were very effective. Owing to the morphine effect visible when first I saw it, the child was drowsy and took but little interest in its surroundings; but within twenty-four hours after beginning with the sulphocarbolate, the morphine meanwhile being eliminated, there was a marked change. The bowels showed less tenderness, the abdomen became soft, and the character of the stools changed. The sulphocarbolate was continued, in the original dosage and at hourly intervals when the patient was not sleeping, until the afternoon of Thursday, September 11, when the interval was lengthened to three or four hours.

At the date named the bowel discharges were absolutely normal in every way, there being but one or two passages in twenty-four hours, and these odorless and formed. As there was considerable loss of vitality, the patient, from Tuesday, September 9, was

placed on 2-minim doses of nuclein, given at intervals of two hours, with the result that the child's condition in general showed marked improvement.

As no medicine other than the copper sulphocarbolate was given from Friday night till Tuesday afternoon of the following week, I have every reason to believe that this agent had the effect of bringing the condition of the child to normal. The diet in this case consisted of albumen-water from the time the patient came under my observation until Tuesday afternoon, after which she was given the white of a "coddled egg" three times a day, in addition to the albumen-water between meals.

This was a case in which the other doctor told the parents that, in the event the morphine mixture failed to stop the diarrhea and relieve the other symptoms, he had exhausted himself in so far as bringing about a satisfactory termination was concerned. He made no effort to remove the cause, but rather, through the administration of opiates, locked up the bowels and the pernicious organisms present. With the removal of the latter, the change for the better was remarkable, and, with their further inhibition, through the agency of the copper sulphocarbolate, a satisfactory termination was reached, and that within six days after my first call.

Had this child been treated in like manner from the start, it is more than probable that the sickness would not have extended over more than a few days at the utmost; for identical cases coming under my observation have submitted within a very short time to the clearing out and cleaning up of the bowel. Copper sulphocarbolate, in identical cases, has given me satisfactory terminations within forty-eight hours, in several instances.

In order that results may be obtained, this copper salt must be pushed—and pushed hard—from the very beginning, and kept up until its full effect has been demonstrated by the return of normal stools. I have found that when this is done there is but little need of the use of any other remedy, as the placing of the bowel in a normal condition, and that quickly, suffices to allay other symptoms. The case reported was diagnosed as an enterocolitis with ulceration.

GEORGE L. SERVOSS.

Gardnerville, Nev.

[We have long known that the copper salts are highly destructive of certain forms of vegetable life—the algae of stagnant water, for instance—and we hardly need say anything about the value of copper arsenite, which many readers of this journal have used with good results in the treatment of the summer diarrheas of children. Everybody who has tried them knows what the sulphocarbolates will do. Putting two and two together, copper sulphocarbolate *should* do in many cases just what it did for Dr. Servoss in this instance. We beg other readers of CLINICAL MEDICINE to try it and report results.—ED.]

WHO USES THE METZ AUTOMOBILE?

Dr. Samuel P. Shelton, Brunswick, Mississippi, wants to hear from any of our readers who are using the Metz automobile. He wishes to know how it compares with other machines of about the same price. We shall leave it to the "family" to respond.

OBSTETRIC PROBLEMS

When a physician is notified about a pregnancy, if the patient is a stranger, he should go at a conveniently early date for the purpose of (*a*) forming an acquaintance, and (*b*) noting conditions (age, temperament, form, habits, family history, etc.), and of outlining the management of the first four months, such as caution about traumatism, emotion, and the treatment of nausea. He should at the same time request a prompt notification of any abnormality, such as excessive vomiting, hemorrhage, constipation or migraine.

The care and completeness of this first visit usually obviates anything more, in the management of the first half of pregnancy, than an occasional visit of the patient to the doctor's office, although not always. A test of the urine is an indispensable essential whenever we are engaged in a new case, although, as relating to the first half of an average pregnancy, I have found it almost always negative; but throughout the latter half the urine should be watched closely, and especially so if emunctory symptoms indicate it.

It is a mistake to leave the impression upon the patient's mind, or her relatives', that her condition is anything but simply a natural one. Keep her as far as possible away from the notion that she is in a dangerous situation. This goes a long distance toward making for yourself a successful accouchement, for it has long since been proven that mental impressions affect ten-

fold worse the mother's physical condition than they ever injure or deform the child. Kind suggestions, from time to time, concerning diet, dress, coitus, and so on, may be necessary, as well as requesting the husband to make her as cheerful and jolly as possible without indulging her too much in fancy foods and drinks.

From the beginning of the latter half of gestation and increasing toward confinement, the doctor should never neglect to note the patient's progress; carefully noting any symptom of deficiency either in nutrition or excretion; also, as the term advances, satisfy himself about the child's position. It is now, also, that his suggestions offered as to dress should be made more explicit and mandatory.

Insist that all her clothing be suspended from the shoulders, save the abdominal supporter and the hosiery. Advise her to continue physical exercise in keeping with her strength and other indications, and especially not to seclude herself into misery because of her appearance. It can be nothing but detrimental for her to remain shut up in jail, as it were, for four months before confinement. To this very disposition in some women may be ascribed invalidism and even deaths. It induces lethargy of secretions and excretions, of muscular tone, and of organic functions generally; and it introduces that mental specter, "dread," the bane of those anticipating any physical ordeal. Direct a simple but a plenteous, nutritious, easily digestible and assimilable diet, and abundance of pure water. Give instructions about baths, especially the warm twenty-minute sitz-bath, which should be indulged in every other night for three weeks before confinement in primiparas; less by one-half for multiparas.

Thus we have touched along up to labor, the absorbing incident anticipated by at least three anxious individuals (usually many more)—the patient, the husband, and the doctor.

The lying-in chamber, next, should be a well-lighted, cheerful, and well-ventilated front or other prominent room, never the family "sick-room"; and it should be furnished plainly, but as tidily and conveniently as possible. The bed should be, when possible, of the hospital type—low head- and foot-tops, with a sanitary cotton mattress on an improved link-and-coil metal-frame spring. (This is the best spring, in the writer's view, because of its nonsagging quality and easy firmness.) Over the mattress should be spread a thickness or two of paper carpet lining (clean, of course), and on top of this the rubber sheet (a piece of new oilcloth is good), and over that a clean heavy sheet. Then fold another clean sheet, placing the single top end under the pillows and the folded lower portion under the shoulders. The under, or heavy, sheet may be folded back down under the shoulders also, which will facilitate its removal later. Use as many pillows as the patient wants.

When labor is completed, remove the rubber and the heavy sheets, and bring down the clean folded sheet from beneath the shoulders. The paper covers should remain as absorbents for a day or two. The patient should be allowed to choose the amount of bed-clothing over her, but everything must be clean. One sheet usually suffices until the third stage has suddenly passed into the puerperium, when more covers will promptly be called for. As soon as possible after all the particulars about mother and babe have been completed, the doctor should cleanse and inspect the mother, and direct the removal of the soiled bedding, bring down the clean sheet, apply the firm, smooth, snugly fitting abdominal binder (which should reach from the trochanters to the ribs) and then order the nurse to sponge off the patient's chest, arms, head, and neck, and particularly the breasts.

And now, when also the newborn babe's toilet is complete, it may be allowed to try its syphon instincts, as this accelerates uterine contractions; and often they are beneficial after a prolonged labor, when it is that the womb does not quickly close up on the bleeding surfaces.

Thus far we have touched upon the physiologic treatment of the normal pregnancy, so let us review briefly the indications for therapeutic measures as they occur to us in the various paragraphs of this article.

Nausea and vomiting of pregnancy are physiologic in most cases, that is, due to normal physiologic changes; but they often assume a pathologic state bordering upon perniciousness. A case in the writer's practice may illustrate at this point.

A slender, 18-year-old, brunette wife, in her first conception, developed a stubborn, incessant vomiting almost immediately afterward. She was given minute-dose calomel, followed by mild saline laxatives till purgation. This treatment covered two days. She remained weak and in bed for seven days, when the vomiting returned with all of its former stubbornness and continued for

fourteen days, during which time she did not retain any food or drink. The treatment of this attack was: Calomel, 1-10 grain night and morning; ingluvin, bismuth, cerium oxalate, ipecac, nux vomica, and a few others, at various times and in varying doses, but seemingly without beneficial effect. The case grew alarming because of threatened exhaustion. The last expedient used in this attack was an ice-pack over the epigastrium. The vomiting finally subsided, and we discussed the question of abortion in the event it should return.

After a rest of one week, vomiting again set in. The morning dose of rochelle salt, I may state, was continued throughout the interval. The ice-pack was again used, but this time without avail. Heat was substituted, supplemented by counterirritation over the vagus, and ice to the spine, while the cervix was cautiously mopped out with a solution of cocaine and aconite. None of this relieved the vomiting, although they were persistently used for another week.

At the end of the time named, Harkin's method of vesication over the fourth and fifth dorsal vertebras was resorted to, when, within six hours, every symptom of nausea had disappeared, and the woman asked for some "parched corn" (with apology to pellagra specialists), which was given her after being well ground in a coffee mill and mixed with milk. She ate it with a relish, retained it, and went on to term with no more sickness. Her baby was born without incident, was of normal size, and without a blemish. The placenta was small and the cord fourteen inches long. She made a good recovery.

The foregoing case was unique because of the seven-day recurrence, the absence of any alimentary or renal disease, and the patient's appetite for the "parched corn." Since then I have seen several aggravating cases of excessive vomiting of pregnancy relieved by the "parched corn" alone; however, we cannot yet claim any specific for this ailment that ranks with those for some others ("606," for instance).

As a rule, the suggestions given at the first visit, namely, those relating to mental occupation, inhibition of or abstinence from sexual excitement, and careful observance of other physiologic laws and processes, will go further to obviate this condition than almost any other therapeutic regimen. For the morning-sickness of multiparas, Fowler's solution of arsenic, in 1-2-drop doses every half hour for five or six doses, is an excellent remedy, as are also the milder arsenates, given, as tonics, at intervals throughout the period of gestation. This seems to exert a beneficial effect upon both mother and child.

The kidneys, in pregnancy, must perform, together with the other emunctories, an increased amount of work. This, in the first half of the term, is due to vasomotor changes through the sympathetic system, in which hyperemia of an organ, or of a part, has the effect of relaxation—i. e., vasodilatation—upon tissues supplied through nerves of that system in other parts; hence, the kidneys, working under higher pressure than any other organs of the body except those of the brain, exhibit changes almost simultaneously with the brain, and probably of the same character.

The kidneys being an excretory, furnish us diagnostic material, through the sewage, by means of which the higher organ may be successfully treated. While all of the physiologic processes that produce the sympathetic changes in these two organs are better studied in connection with those of the liver, the heart, and other organs, we may, even then, not fully comprehend them; still, we already are sure of the effects of the cause. In other words, we know it to be a toxemia, with its dismal train of symptoms: albuminuria, anasarca, nervous disorders, gastric derangement, uremic convulsions, coma, and, in the end, death.

The conditions thus presenting themselves to the medical attendant suggest the treatment: unload every tube of the body of its contents; and this may be done by osmotic (exosmotic and endosmotic) means, through the employment of hydragog cathartics, diuretics, diaphoretics, in connection with stimulants and supportives.

The hydragogs include the laxative salines, the mineral and vegetable salts, alkaloids, and fluids; any of which should be chosen that are expected to act quickest without endangering mother or child. The diuretics may be given simultaneously with the purgatives or separately when incompatible; but they are imperatively demanded and should not be delayed. Diaphoretics are seldom contraindicated where conditions necessitate the immediate use of the other two depletives, and, hence, may be given at the same time, especially if topically administered (as the hot bath, hot-pack, vapor-bath, or hot air from a spirit-lamp conveyed through a long-tubed funnel inserted beneath the bed-covers).

Familiar with all purgatives and diuretics, as we are, I shall enumerate only those from

which we may expect best results, to wit: Pulvis jalapæ compositus, 30 grains, repeat if necessary. This should be assisted by potassium bitartrate, 1-2 to 1 ounce daily, to keep up free hydragog action. With the latter may be combined infusion of digitalis, both of which are our best diuretics. (Jaborandi—or pilocarpine—should not be used, in this condition, except in sthenic individuals.)

In this condition we must interdict the frugal diet, but not the copious use of water. Milk is probably the best single food, until the severity of symptoms have passed, then gradually lead up to more substantial alimentation by admitting, a few at a time, some of the blander foods (oatmeal, rice, soups, etc.) But it is the part of wisdom to forbid all meat until every symptom of the trouble has disappeared.

The treatment of eclampsia occurring before delivery differs but little from that during or after it. In all cases occurring before, one should be prepared to see a return during or at about confinement—certainly, and make preparations for it. Here is an illustration:

A stout, young, freckled woman, whom I had never seen, who was alone with her two little boys when she had to take to the bed, and sent the children three miles after me. Upon my arrival she was so hoarse that she could scarcely speak, while her face was puffed out of all proportion, as was also the entire body. She said that her health had been good up to a few weeks back, when that swelling set in. Naturally I was unprepared to encounter such a situation, and had to do the best I could under adverse circumstances, not even a neighbor living within reach. Quickly resolved, I promptly and without accident delivered that baby. Of course I had to do everything connected with the job, which required about three hours. Before I left, the woman took the baby in her arms and remarked that she would name him for me. This was about 5 p. m. Near the same hour next morning her husband came hurriedly for me to return with him, stating that his wife was "having spells."

Arriving, I found her in a violent convulsion, even worse than I had anticipated on the day before. She was given a chloral and bromide enema, chloroform anesthesia until relaxation was induced, and then the eliminants as outlined above were resorted to. She did not regain consciousness until noon on that day, and when she did, I could not make her remember anything that occurred the day before. She wanted to know whose baby that was, and nothing could recall to her mind a single incident of the day before, although she directed me to find the bed-clothes, child's clothes, soap, and everything I asked for; seemed perfectly rational, and has remained so ever since. But she has never been able to recall anything of that particular afternoon. My unprepared "fix" on this occasion taught me a valuable lesson—never to be unarmed when the devil comes.

Convulsions may occur without visible premonitory symptoms any time during pregnancy, confinement or early in the puerperium. An attack during labor is indication enough to hasten delivery, but not at the expense of neglecting the mother's treatment at the same time; she can be served by the attendants while the doctor works. The treatment as here outlined is applicable to the condition arising any time, and has proven the best in my experience, although I am always glad to discover a better one, and the hope of doing so makes me vary the remedies used, every now and then.

So far as my personal experience is concerned, ergot has a very limited indication in the entire field of obstetrics. Strychnine has fulfilled them all without the danger attending ergot when administered to certain individuals. Being a powerful arterial astringent, I have seen varicose veins of the flaccid abdominal walls follow its administration, and in cases of severe effort (such as that attending labor, vomiting or eclampsia), two deaths from apoplexy, which were directly ascribable to its action, having followed within one hour after the dose that had been given before my arrival. I could not ascertain the exact amount of the dose given. Its indications are but two in this field, namely, to hasten expulsion of the uterine contents, and to control hemorrhage. If given in sufficient quantity to produce either result, this is accomplished through the toxic action of the drug upon the unstriped muscular structures; and that is always attended with more or less danger. I have seen one case of rupture of uterus follow a dram-dose given to a primipara after a prolonged, incomplete labor, and when Bandl's ring could easily have been detected by the attendant.

The hypodermic injection of morphine, if given earlier than one hour before delivery, will show its effect upon the child, the same being born in a more or less narcotized con-

dition and often difficult to resuscitate, sometimes even being beyond resuscitation.

As an anodyne, chloroform whiffs are far superior in the first stage, and carried to anesthesia, if necessary, during the second. But here, too, is where cheerful faces and words of encouragement and praise for the patient will exert a remarkably salutary influence in overcoming her terror and suffering, and, moreover, will leave no trail of the serpent in their wake.

Morphine induces insensibility to pain, but hinders no pathologic process creating it. Its physiologic action is (*a*) stimulant, (*b*) intoxicant, (*c*) analgesic or anodyne), (*d*) paralyzant, (*e*) antibiotic. It is the one remedy most readily obtainable by the tyro, which is responsible for so many dope fiends —and they are legion. It is the one proud possessor of the power to create any ailment that would indicate to the inexperienced, unsuspecting, honest doctor its immediate and liberal use.

So, let us discard morphine as a remedy, except in well-selected cases and then in the hands of an experienced physician only. (This is meant as a long-range, sharpshooter's suggestion toward suppressing the evil.) The best way for us to handle this drug is *never* to prescribe it, but to issue and administer it ourselves in every instance; except in the case of confirmed habitués, who should be furnished the remainder of their lives with it at absolute cost. But let the present generation of morphine-fiends be the last of that sad class. In this connection, permit this personal assertion: such remedies have no place whatever in obstetrical practice, unless in the most skilled hands, and then they should be used not once in five hundred cases. By locking up the secretions, morphine induces all the troubles of uremic poisoning.

Tinctura opii camphorata is one of the physician's vade-mecums in the lying-in chamber. This preparation contains but 1 grain of opium in 250 minims, which, in combination with the camphor, oils, and other ingredients, is almost robbed of its narcotic effects upon the adult. It is excellent for relieving after-pain, quiets and soothes the nerves in the nervous crises six to eight weeks before confinement, and, given to the mother where indicated, will relieve the baby's "several months' colic."

LEWIS W. SPRADLING.

Chattanooga, Tenn.

[Dr. Spradling's paper is full of useful suggestions, upon many of which we should be glad to comment with a word of hearty commendation, with here and there a mild criticism, since naturally we cannot agree in everything when we come to details. But there are several points to which we would like to refer, and we will do so with the doctor's permission. For instance, anent the treatment of the troublesome and occasionally "pernicious" vomiting of pregnancy, we call attention to the article by Dr. Lyon, which was published in CLINICAL MEDICINE last year. Applying the observations of Blodgett, Dr. Lyon was able to show that in these cases there was a form of acid intoxication which yielded to alkaline treatment. One of our correspondents has since written us that he secured even better results by combination of the alkali with an intestinal antiseptic and an eliminant.

In the treatment of eclampsia, Dr. Spradling certainly gets down to first principles, since *elimination* is of primary and essential importance. There is one drug, however, that we think of so much importance in this condition that we must call attention to it, namely, veratrine. No other single remedy with which we are familiar is equally efficacious. To hold the convulsions under control while securing the thorough elimination which Dr. Spradling advises, we know of nothing equal to hyoscine, morphine and cactin. Morphine alone has all the disadvantages pointed out, but these are for the most part absent in the hyoscine-morphine combination, which is not only far more potent, but also much less toxic. In eclampsia it controls the convulsions, and in normal labor it may be used with perfect safety, and with a wonderful degree of satisfaction, as attested by thousands of physicians and tens of thousands of mothers, whose labors have been made practically painless by its use.

We shall be glad to receive reports of practical experience from other readers of CLINICAL MEDICINE upon obstetrical topics. Who will submit something?—ED.]

VACCINATION AND TUBERCULOSIS

The covert intimation, insinuation or claim that vaccination is in any way conducive to the propagation or invasion of tuberculosis, cancer, or any other of the human ailments is about as absurd as it would be to assert that it is responsible for

corns and bunions, No one who has had any practical experience in smallpox cases and has had an opportunity to observe the protective and beneficial effects afforded by successful vaccinations would never jeopardize his professional reputation, if he had any, by proclaiming in this enlightened age that vaccination does not protect, or that it invites an invasion of tuberculosis or the ingrowing of toe-nails.

The writer practices in a sea-port town and has had some experience as health-officer of the port with cholera, yellow-fever, smallpox, and other infectious and contagious diseases for nearly fifty years, and he has little patience with those who belittle or deny the protective efficacy of vaccination.

GEO. D. STANTON.

Stonington, Conn.

AN APPRECIATED COMPLIMENT. A DOUBLE MOUTH

I have been taking your valuable journal for some years and appreciate it more each year; I should not like to get along without it. The alkaloids also are proving themselves my best friends in time of need.

No doubt the profession will be interested in an instance of curious congenital malformation that came under my observation—a person having two mouths. I have never heard of one like it. The subject is a Korean girl, twelve years old, who recently came to the dispensary for treatment.

The extra mouth, I found, was formed from the inferior maxillary, and had a separate row of ten teeth, in the center of which was a growth resembling a tongue. A fleshy septum, ¼ inch high, extended from the lips to the angle of the jaw, dividing the two buccal cavities below, but there was no division above this. The upper jaw was normal, the cheek extending out to cover the extra mouth, forming the lips and uniting with the flesh septum in front. The accompanying photograph shows this better than I can describe it.

Fig. 1. Dr. Purviance's case of a child with a double mouth

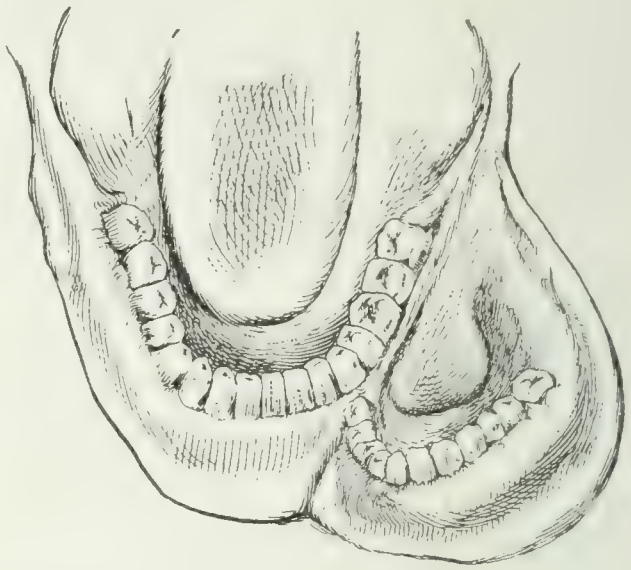


Fig. 2. Showing the double mouth

The girl was no beauty, by any means. By removing the teeth, tongue, and a part of the inferior maxillary and doing a plastic operation upon the cheek and lip, her appearance was greatly improved. She returned to her village happy. I am sorry I did not get another photograph before she left, showing the results.

W. C. PURVIANCE.

Chung Ju, Korea.

CRIME AND WAR

[The subjoined correspondence is of so much interest that we reproduce it in CLINICAL MEDICINE.]

DEAR DOCTOR WAUGH: I want to give you a little fuller statement regarding your article on "Crime and War." You advocate war as the remedy for an existing condition, namely, the prevalence of crimes of violence—robbery and murder.

War is wholesale robbery and murder, organized robbery and murder by the government and a considerable number of citizens.

You prefer organized to unorganized crime. Why? And why is wholesale crime better

than sporadic crime? In New York, Chicago, San Francisco, Vancouver, etc., we have seen examples of systematized robbery (and murder) and white slavery under the protection of the *de facto* government. Was it better than the unorganized crime?

What would you think of me as a physician if I were to advocate wholesale inoculation as the remedy for sporadic cases of smallpox?

Before advising a remedy for a social condition, it is advisable to have some knowledge and ability, but a physician is not necessarily a sociologist. Frank Lyddston can give you some information on the causes of social disorders. I suggest that you read "War—What for?" a book published by George R. Kirkpatrick, West Lafayette, Ohio.

I do not underestimate the value of military drill. But drill and war are quite different.

I am sorry my letter gave you the erroneous impression that I was angry. I was—and am still—astonished at such a prescription from you. Sincerely yours,

T. Proctor Hall.

Vancouver, Canada.

Dear Doctor Hall: Yours of the 4th is before me and has been read with full appreciation. Do I advocate war? God forbid! But you are looking upon this question in the abstract, while I have been studying the individual.

These young men to whom I refer, are restless, full of elemental forces, do not yet realize the needs of society's restrictions as do we older men.

Years and experience are needed to bring wisdom. The man begins life as a savage, but gradually learns to restrict himself as his needs infringe upon those of others.

To take, is natural: to recognize other's rights must be learned. So, these youths become robbers evolutionally. As they realize society's demands, they may become honest evolutionally, or substitute legal for illegal methods of preying upon their fellows.

Do you recollect your boyhood? Was there not a "dare" in the neighbors' orchards and their defenses? A challenge most boys could not resist, even though they could have had the fruit for the asking?

Naturally, some youths steal, rob, transgress the law, for the sake of the generation of freedom.

Let war be declared, and a vent for ebullient youth is found. The inherited interests make warriors of them. They welcome the call to arms—and the thought of serving their country is ennobling; it makes heroes of those erstwhile criminals. Patriotism, of all virtues, is the easiest to be aroused, and the most ennobling.

War is an evil that may become extinct when the sexual evil and the alcohol curse have ceased; but until the millenium dawns we shall have these three things to deal with. And we must consider conditions and men as they are, and not from the standpoint of the ideal. Very truly yours,

William F. Waugh.

Muskegon, Mich.

MALINGERING, VACCINES, AND NATURAL IMMUNITY

Just a few rambling thoughts that articles in The Clinic call forth. First, about malingering. My surprise is, that a doctor would think of anything else than that the parturient woman would do anything other than stay in bed nine days. I say "Glory be" to the man who made it possible for mothers to have proper care at childbirth.

Then there is the great furore about vaccines. Some get enthusiastic over them and are reporting nothing but successes, going so far as to class those who do not use them as ignorant and not entitled either to the respect of the profession or the confidence of the community. On the other hand, there are those who meet with failure on the first trial and then utterly condemn the method.

My own way has been to go slow and watch results. Our journals are not nearly as full of "606" as they were, and I note that a number of good men are taking the same ground that I did at the start, namely, that it is a good remedy in selected cases, but that it would be necessary also to give careful treatment over a period of two years, just as we always had. Unless you study each individual as a patient and treat him accordingly, you won't get very far anyhow.

My experience in life has been that, "The greater the prejudice the greater the ignorance of that particular thing." Let us go slow, give every one an opportunity to be heard; give every man credit for sincerity of purpose and honesty in his deeds; let us not condemn any good thing because we do not like the man or his methods; let us remember that doctors have opposed many good things, as well as enthusiastically accepted many things that proved to be no more substantial than a soap-bubble.

When I was a boy scarlet-fever and diphtheria were very virulent. Typhoid-fever epidemics were more frequent and of greater

severity. I believe that to sanitation and more hygienic living the credit is entirely due for the lessening of these scourges.

There is no immunity like that from the healthy human body and clean living.

Let us, then, admit that there are some tools we do not know how to use, that we are not skilful with others, that others that are absolutely of no value in our hands might be just the tool needed by someone else.

I can chop down a tree with an ax, and the stump will look as though a horse had gnawed it down. You could take the same ax and cut another and leave a stump as smooth as a polished floor.

Do not condemn hastily, hold fast to that which is proven, and always have an open mind for the claims of the new.

H. M. HOLVERSON.

Boise, Ida.

THE PHILANTHROPY TRUST

Why is it that doctors and lawyers continue to be the butts of countless jokes throughout the centuries, even to this day? Even the most sober-minded individual feels justified in making fun of the mistakes, the fees, and the pious claims to philanthropy for which doctors are responsible. And as for lawyers—why, the very name of lawyer is in many minds synonymous with roguery, as it has been since time immemorial. Let some legal light arise to plead the cause of the lawyer. In this connection, I wish, not to defend the doctor, but to offer a remedy for his plight.

I feel that doctors, as a class, have no reason to complain about the treatment which the public hands out to them. They ask the public to appraise them and their services according to one system of values, while they themselves use an entirely different basis in measuring up the public and its deeds. What do I mean? Simply this. Doctors make claim to the world's especial sympathy on the basis of their philanthropic exercises and then proceed to demand from the world a material reward for their services, just as does the man who shovels the front walk and beats the carpets.

Now, the world does not object to the claims made upon its sympathy; neither does it object to fees, that is, not to the abstract principle of fees *per se*. But common humanity does object, and strenuously, to paying twice for the same services—once with worship, and once more with cash. The Scottish bard wrote, "He who mixes brandy and water spoils two very good drinks." So he who does a kind act, be it never so kindly intentioned, and then claims a material reward as his just due spoils the good impression which he otherwise might make upon the public, whether judged from philanthropic or a material standpoint. Please do not understand me as making excuses for the public; and also remember that I'm sorry for the doctors. But "pigs is pigs," and facts are facts.

So here, the overpowering fact is, that the public does not approve of the double role the doctor tries to carry; to wit, that of volunteer martyr and short-sighted financier. And just as long as doctors persist in trying to fool Mrs. Grundy into believing that they actually hate to take her money, just so long will she persist in considering doctors as a bungling lot of hypocrites.

Come, let us reason together, brother doctors, as many of us as are entirely dependent upon our professional incomes to pay our bills.

In the towns where we live there are at least twice as many doctors as are actually needed to attend to the medical wants of the community. There is just so much medical work to be done, and what part of it one doctor is called upon to do the other doctor or doctors can not do. The country at large, all cities, and most small towns in particular, are overstocked with medical attendants.

There is at least one family in your town who have always employed Old Dr. Z. But you hear, in a roundabout way, that they are dissatisfied with him because he is getting old and careless—or at least they think he is, which amounts to the same thing. Some fine day while you are repairing the hen-coop your wife rushes out of the kitchen and in an excited stage-whisper blurts out: "John! John! Hurry up! Mrs. Rox has just telephoned for you to come up to the house right off. Old Rox has just been taken with another of his bad spells. Hurry up and shave and put on your new suit!"

What a "philanthropic" thrill there chases through your system at the thought that you are to be allowed to "serve humanity!"

Oh you doctor! The whole world knows that you rejoice simply at the thought that you have gotten another of Old Doc Z's families away from him. And he, poor man, needs the business more than you do, and you know it.

We do some charitable work; so also do the farmers, the grocers, the lawyers, the mechanics in our respective communities.

They do their charitable acts voluntarily. But we, on the other hand, allow the public to impose upon and "skin" us mercilessly, simply because we are too consarned lazy and shiftless and jealous of each other to organize and prevent them. We do the larger part of our socalled charitable work because we can't help it, and then attempt to pose in public as halo-crowned martyrs—and, oh, how we do grind our teeth and cuss every time a deadbeat "sticks" us! If ever our wives should be unkind enough to repeat the remarks we make about the "charity-work" we indulge in, perforce—O dear! O dear! How we do tongue-lash (in private) our degenerate, penniless patients and then kick the dog and slam the door, to ease our feelings! And the next minute we try to fool the world into believing that we are, oh! such willing, self-sacrificing philanthropists.

Personally I do not think that doctors, as a class, indulge in a bit more of voluntary, self-sacrificing charity than do ordinary individuals in other walks of life. The men who serve on the staffs of our big hospitals do so in order to perfect themselves in their art. It gives them prestige in their respective communities also, while putting dollars into their pockets. The work they now do would be just as well done—possibly better done, in fact—if they were to resign in favor of some of the dozens of other doctors who are anxious for their positions. Why, then, all this talk of charity and self-sacrifice?

There have been and are now plenty of heroes in the medical profession, so also in the other walks of life. But it is not delicate-minded for us to assume so much loftiness of ideal to our own selves and demand obeisance therefor from the public. I am as charitable-minded and tender-hearted as are any of the average members of the profession; in fact, I feel that I am thus inclined more than are the larger number of the physicians I have met. I try to treat my patients fairly in the matter of attendance, not piling up useless visits nor making exorbitant charges for simple medicines. I like to feel that what little income I have has been honestly earned. But, yet, I am in the doctoring business for, one and only one, reason, namely, to gain a living. I want to square up my accounts, pay off the mortgage on my new house, send my children to college, and then have enough left over to provide for the necessities of old age, besides providing a few luxuries, if that be possible.

I am glad, of course, when I am able to relieve suffering, save life, or comfort the sorrowing, just as I should be if I were earning my living in some other walk of life. But, if I had my way, I should collect a fee, and a fat one too, from every single patient I treated. Then I could dispense charity along lines of my own choosing, rather than, as I am now forced to do, by involuntarily treating entirely free of charge so many patients who for the most part are unworthy willful deadbeats. For the more or less of this kind of work that I am forced to do I neither ask nor expect any praise or applause.

I am not a whit more lofty-minded than the other men in my village who are earning their livelihood at their different daily tasks. And what is more to the point, brother doctors, you are not a whit more holy and philanthropically inclined than I am. And the world 'round about you doesnt' think you are, either, And if only you would confess to the public your actual state of mind, the world would respect you far more than it does at present.

I suppose that my "sordid state of mind" will be considered by most of you as a rank sin, and that, if only my name were known, I would be marked for immediate professional execution. If so, let him who is without sin among you cast the first stone.

NEW ENGLAND PILL-SLINGER.

MALIGNANT PUSTULE CURED WITH MERCURY

That case of anthrax, or, better, malignant pustule, which Dr. Edwards writes about in the March number of CLINICAL MEDICINE, reminds me of a similar case under my care, in the fall of 1876, at St. Louis.

The patient was a young man about 20 years of age, the son of a farmer living in the outskirts of the city. I found the young man with high fever (104° F.) and delirious, his face swollen enormously, eyelids closed and distended like bladders, the neck and shoulders also puffed out and darkened. My diagnosis was phlegmonous erysipelas. Fearing the case hopeless, I asked Professor Hall in consultation, who also entertained severe fears, diagnosing a specific poison, presumably syphilitic; but as there was no sign of syphilis on his genitals, that poison must have been inoculated by a kiss, he thought.

The patient was given large doses of potassium bromide with tincture of veratrum viride; also this mixture: mercury bichloride, gr. 1; potassium iodide, ozs. 2; mint-water, ozs. 3; dose, one teaspoonful every two hours, alternatingly with the bromide. Lo-

cally, we ordered poultices of crushed cranberries. About fourteen days after the swelling was gone, the medicine was given less often.

After the delirium was over, I asked how he came to his disease. He told us, confidentially, that, taking away, against his parents' will, the hide of a cow which died of murrain, some of the poison came in contact with his eyes and face. He was up again in fourteen days, but had to consult an oculist for his eyes, which had suffered the most.

I can find no mention, in any of my treatises, of the use of mercury, in this disease, except that the Homeopaths speak of cyanide of mercury as a remedy against malignant pustule.

E. A. Vogt.

Oxnard, Calif.

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[Doctor Vogt is a live one—for a man to have attained the ripe age of 80 years and still continue in active practice is something to brag of. Or is it that California climate? —Ed.]

THE MEXICAN REBELLION

When I was writing a recent communication for this journal (see July, p. 602), I did not know whether I should live to finish the tale, as really the advent, or rather uprising, in the hot part of this country was unexpected. Remember, that at the conclusion of that letter I informed you of an impending attack upon Apatzingan—then my home city.

Well, the town was taken, without resistance, on May 11, and the rebels under Zenobie Moreno and Villasenor held it for five days, when they left for Aguililla. During those five days they got rich booty in the way of horses, saddles, arms, and ammunition, and money to the extent of about $1500.

In war, two qualities make themselves notable—frankness and treachery. The authorities and the people of Apatzingan did not display very much frankness, as will be seen further on, and that is what cost the town its existence.

The rebels left on the 16th of May, but with the threat that they would return. On the last day they came to me also for ammunition and arms, which I refused to give up. They offered to buy, and as I did not want to sell I had to explain, when hard pressed, that I intended to use my arms for self-defense against themselves if there was need for it, but that as long as they would leave me alone I intended to be strictly neutral, and that I should attend to their wounded with the same care as I should attend a wounded soldier of the Government, and without fear on their part that I might disclose their retreat. So they did not insist, and treated us with a great deal of courtesy.

On the 27th of May about 100 Federals made their entrance, but departed again on the 28th, leaving a garrison of 20 men in the place. I and my party quit the place on the 29th for Uruapan, but when we arrived at Paracuaro I heard that this place was about to be attacked by a force of 1000 men; so I did not proceed any further. As Paracuaro is only a distance of three hours' ride from Apatzingan, I was in a good condition to observe what was going on in the last-named place, as well as in Uruapan. At about 5 in the afternoon on the 30th and when it was believed that they were several days' march from the town, the rebels rushed the place from three sides, taking the government soldiers unawares. However, the rebels lost 36 men and the defenders 5, one of them being the telegraph operator. But the town itself (that is, the center of it) was burned to the ground, only the suburbs being left, to show where Apatzingan has been. Mrs. Hollmann and I went to give such aid as was in our power, and the smoking ruins of the beautiful place and the frightened faces of the homeless people presented indeed a painful sight.

On June 3 an attack was made on this town (Uruapan) and it lasted without intermittance from 11 in the forenoon until the next day the same hour, when the defenders, composed of the same townspeople, had to give up, owing to the lack of ammunition.

The attacking party lost over 150 men and the defenders only three. Owing to the very stubborn resistence the rebels encountered, it was expected that they would exercise reprisal; but they behaved very well, indeed, exacting an indemnity of only $14,000, and giving their men three hours to sack. The damage done in the looting amounted to about $25,000, but they protected the city from the looting of the rabble, which would have been terrible, indeed.

Among others, they hunted unsuccessfully for a German by the name of Wilhelm Wolf, with the intention of executing him, as he, being a fine shot, had killed fifteen men of theirs, picking off the dynamiters in the act of throwing their bombs, but which never left their hands and on several occasions had exploded near the dead bodies of the throwers

in every instance and who had been shot through the heads. On this account, it is believed, the town escaped being burned. Wolf left the town for Morelia as soon as the Federal soldiers came in, out of fear of assassination from some sympathizers left behind.

We were still in Paracuaro when the rebels came in from this city from different directions in bands of from 50 to 60, having chosen that town as their rendezvous.

In Paracuaro, one man, Captain Basave, one of the rebels' principal dynamiters, died of a bullet wound from a 30-30 he received when about to throw a bomb. The bullet struck him in the upper maxilla, and, as he had ridden two days in a tropical sun without attention of any kind, gangrene set in and he died the next day.

The socalled Colonels Porcallo and Almaro, who commanded the party, extended me every courtesy; and when Mrs. Hollmann, rather unstrung from the emotions of the last week, broke out in tears, they seemed very much affected and vied with each other in kindness and protestations of friendship and respect. And they complied to the fullest extent with their promises, which again proves my assertions on a former occasion, that foreigners have nothing to fear, *so long as they mind their own business.*

I will fight, and fight like the devil, if they should try even to take my arms from me, and they know that too; but it would be foolish to suppose that that is the reason of their respecting me or that they are afraid of me. But they are sure of my neutrality; they know that I will not use my arms against them; and, so, they allow me to keep them for protection against small bands of bandits, and *they* protect me besides. It seems rather strange to me, that foreigners should fight on either side, and then, when it goes against them, they will squeal and ask for the protection of their government, and in that way cause much unnecessary international bad feeling.

So far as the Mexicans are concerned, we again note their deplorable lack of patriotism; as that is what really keeps the revolution alive. Egotistical as they all are, they will look only after their own interests, and, trying to stand alone, they do not stand at all. Thus, for instance, we saw in Apatzingan, when Moreno and Villasenor, whose people were very poorly armed, desired to make peace with the Government, they asked for 1000 pesos ($500) to pay off their men.

The town did not want to fight, neither did they want them to come in, so they promised these rebel commanders a thousand pesos. I volunteered to help and was the first man to bring my part of the money, pointing out to them the fact that, as the rebels had a payroll of about $120 or more per day, it was necessary to collect that money quickly, for their demands would, of a necessity, be greater with every day that was lost. And, yet, some very rich men who had subscribed 50 pesos sneaked out of town in order to avoid paying this small sum.

On the 11th, the rebels came into town on a charge and took possession, but, as they really were tired of playing at revolution, they did not commit any abuses, not even turning out the prisoners. Thereupon, the people of the town, emboldened, just made up their minds to fool the intruders altogether. And that lost them the town; for on the fifth day they forced the different citizens to give up, all told, 3000 pesos, exacting as much as 500 pesos from some men. Besides, they took all the arms, ammunition, and horses they could find; and, in addition, they found a depository of government arms and two mule-loads of cartridges.

Fifteen days later they returned and attacked the town with its own arms, and since then, besides destroying the town, the damage done by them in other parts is incalculable.

Here, in Uruapan, the rich men (and there are several millionaires) were requested to contribute with $2500 with which to buy ammunition for the protection of the town. They refused, and we have seen the results of this refusal. There also exists a certain estrangement between the wealthy and the poor. As I have said before, the poor class, the rabble, is the worst enemy a town or city can have. On the other hand, the well-to-do do not take any interest in the poor, as was demonstrated here in Uruapan, where the rich had the defenses thrown up only two blocks from the center of the city, leaving all the rest of the city, the property of the smaller holders altogether exposed and without any protection whatever.

Again, the rebels take all the horses, saddles, money, and arms they can get. Then the despoiled owners call on the government for protection; but they will not help the soldiers by offering them remounts for their jaded and played-out horses, and the result is that they never can catch up with their elusive and nimble enemy. Nay, they will not even let a soldier have something to eat if he has not the wherewith to pay on account

of being too far from his base; and even now there is a tremendous kick going up, because the troops that have come to protect the town have not paid for their lodgings. Add to this the unpatriotic ambition of men who want to be President, Governor or covet some other position or lucrative employment, the reader will understand that the renunciation of Huerta is not sufficient to secure peace. Only Porfirio Diaz knew the remedy for the evil and applied it in the proper manner.

The next time I will tell the readers of THE CLINIC something of bullet-wounds, as made by different-caliber guns, as we have to treat those made by the high-velocity 30-30, as well as by the old-fashioned 50-caliber Remington. The difference in wounds is really interesting and the difference in treatment far more so.

A. R. HOLLMANN.

Uruapan, Mexico.

MAY 25, 1913

I went into the House of Pain
With faltering step and bated breath.
My star of hope was on the wane,
For fear could hear the wings of Death.

I wept whilst one lay still and sighed—
Lay still as I sat there and wept,
And knife and needle painless plied;
For in a magic sleep she slept.

For two long hours she lay as dead.
(Oh! on what tardy wings time flew!)
Whilst men of magic round her bed
Performed a miracle anew.

For two long hours, whilst anguish tore
My heart, they toiled and banished pain,
Then brought her back from Lethe's shore,
And she, I loved, was mine again.

WILFRED HILL.

Birmingham, England.

CLINICAL NOTES FROM BENNETT MEDICAL COLLEGE

When the first stage of labor is unduly prolonged, suspect an occipitoposterior position.—*Rittenhouse.*

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The first principle in treating dropsies is, that the patient must discharge more liquid than he takes in.—*Waugh.*

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The reason we seek to reduce temperature in fevers is to lessen the toxemia; which latter is the source of most danger.—*Waugh.*

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When you want axis traction, and no Tarnier forceps is at hand, slip a long, narrow strip of gauze through both fenestra of the one you ordinarily use. You can make traction with it in any desired direction.

—*Rittenhouse.*

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A bag of waters that is too short to act as a uterine dilator should be ruptured. Let the presenting part come down and act as a dilator.—*Rittenhouse.*

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Veratrine, aconitine, and gelseminine reduce fevers by stimulating the excretion of toxins, not by acting directly against the heat or its production.—*Waugh.*

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Digitoxin stops the dribble of blood that persists, after ergotin has been given to beginning toxic action, in postpartum and post-abortion hemorrhages.—*Waugh.*

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In asphyxia neonatorum, insufflation is much superior to artificial respiration, because in the latter the air *may* go into the lungs, while with insufflation it *must* go in.

—*Rittenhouse.*

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The first and last principle in treating obesity is, that the patient must weigh every bit of food and drink he takes, and reduce the total daily intake until he begins to lose weight.—*Waugh.*

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It is often possible to cut short an acute laryngitis and to prevent the frequent sequel, acute bronchitis, by applying a 3-percent solution of zinc chloride to the interior of the larynx.—*S. S. Bishop.*

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Gelseminine suits fevers with little temperature but with delirium; aconitine-cases with irritability of the stomach; veratrine, when there is exceeding need to stimulate the eliminants.—*Waugh.*

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Tying the cord in two places and cutting between is a relic of the days when it was believed that the mother could bleed through her end of the cord. Better leave her end untied. Escape of the blood from the placenta favors its early expulsion.

—*Rittenhouse.*

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Many cases of acute incipient coryza can be aborted by a coryza tablet given at the onset of the attack. If necessary, repeat the dose once or twice, with two to four or six hours between the tablets. They contain: morphine sulphate, gr. 1-12; atropine sulphate, gr. 1-600; caffeine, gr. 1-6. Flush the bowels.—*S. S. Bishop.*

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

I HAVE been greatly interested, recently, reading about the work of Dr. William Goodhue among the lepers of Molokai. I knew Doctor Goodhue as a student, although I was better acquainted with his brother, Dr. E. S. Goodhue, who is living at Holualoa, Hawaii, and about whom I shall say more later.

Ever since I have known of the great work Dr. William Goodhue is doing at Molokai I have often compared his quiet, unassuming devotion to what he believes to be his duty with the life of the flamboyant, commercialized physician or surgeon so much in evidence nowadays, particularly in our larger cities.

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I know men who would assert that Goodhue has no ambition. Ambition for what? Why, such men as Goodhue and Grenfell have an ambition such as some doctors have no conception of; they are doing a work with which that of many a doctor whom we know does not bear the slightest comparison.

Goodhue and his kind are striving for something infinitely higher and nobler than wealth. I do not wish to belittle ambition; still, it is amusing and in a sense pitiful to witness the struggle of some men for wealth and fame.

Of material possession, what, after all, abides with us but an idea? Are not the good that we do and the truth that we proclaim the greatest legacy we possibly can leave? Think how glorious must be the life of a man who can do such a work as Doctor Goodhue is doing, and enjoy it—a man who can stamp all realities upon his thought, place the springs of happiness within himself and draw thence uncounted pleasures in ideas, in modest service to such poor sufferers as the lepers of Molokai, and through it all unsoiled by an ambition for money or for fame!

How different he from the man whose brain thinks of nothing save the quickest way to accumulate money; for such a one ever is discontented and remains ignorant of the real object of life. David Swing, of Chicago, once said something to the effect that when a man pursues money alone his features become narrowed; his eyes shrink and converge; his smile, if smile he have, hardens; his language is void of poetry and ornament; his letters to friends dwindle to telegraphic dispatches; the man seems to have no time for anything, for his heart knows of but one thing for which it wishes time.

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It is possible for everyone of us to acquire the wealth of goodness, wisdom, and truth; and this, indeed, is true capital—riches no one can take from us. A man with such wealth is not dependent upon anyone's action or inaction. He can accept all that befalls him or is decreed onto him with a thoughtful, simple, and serene spirit. And if he is rich enough in wisdom, charity, and loving kindness he can leave an estate to mankind that will last through the ages.

Men who have given us great truths in prose, poetry, art or music; who inspire us to unselfish and noble endeavor as Goodhue inspires us; who in their simple daily lives have made us better, have lightened our burdens, purified our taste, eased our pain in any sorrow or affliction, calmed the strife of mental conflict or helped us to love our fellowmen better, in short, have taught us better how to live—such men have given more to us than the worth of all the gold that ever was mined.

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Such a man as Doctor Goodhue can wait for death with a cheerful spirit, knowing that what he has done can not be destroyed by falsehood or buried in the debris of ignorance or the lust for money.

However, a doctor need not isolate himself among the lepers of the Hawaiian Islands or the sufferers of other far-away lands to demonstrate the virtues so characteristic of Doctor Goodhue. There is many a medical hero, many a true and great man working

night and day in the hearts of our great cities, suffering bravely and uncomplainingly the loneliness and vicissitudes of a big city, than which there is no life more hard or lonely at times; or practice in remote country districts, unknown save in his immediate community, yet who is successful in the highest and finest sense of the word. All praise to such doctors!

I am writing this while on vacation, and a doctor on a vacation should not write on medical subjects; still, we may write of medical men, and the ones uppermost in my mind today are the brothers Goodhue. I have already referred to the younger brother, and now I am going to say a few words about my old friend Dr. E. S. Goodhue.

Where hast thou been thro' this bright autumn day,
Dear distant friend? Hast sought the mighty hills
That guard thy Doctorage, on by the rills
Marked the wild waters break in crystal spray?

Hast seen the sunlight tremble on the leaves
Of fragrant forest aisles, or in the fields,
When the rich earth her generous harvest yields,
Loitered to watch the reapers mid the sheaves?

And hath memory of thy classmate ceased?
Is there no blossom to recall his name;
No bird his wildwood fancy to proclaim;
No stream that bears his image in its breast?

I question not, for oft from him to me
Come loving messages from far Hawaii.

For nearly twenty-five years we have corresponded, and I believe our friendship has grown with the years, though it has been fully twenty years since we have seen each other.

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Doctor Goodhue was the first one to start a college-paper in Rush Medical College, and he called it *The Corpuscle*. But I doubt whether there were many responsive corpuscles in the hearts of the faculty members; for, as I recall it, the members of the faculty discouraged his venture, almost to a man—maybe one or two wished him well, but they offered no real aid, moral or otherwise.

I had been graduated a year at that time, and, while not a member of the faculty, was lecturing on materia medica and medical pharmacy, and, so, was looked upon by Student Goodhue as a member of the teaching-corps and was interviewed by him regarding the advisability of starting a college-paper. I was enthusiastic over the idea, and encouraged him to make the attempt. This was the beginning of a sympathetic friendship that has continued for nearly a quarter of a century and grown warmer and more enduring with the years.

Dr. E. S. Goodhue not only is a good and successful physician, but an author of considerable note and a true poet. I have preserved every letter that he had ever written me, and, if published, they would surpass in interest and literary merit many a well-known book of essays. His published poetical works are well worthy a place beside those of our best American poets.

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I do not know whether my friend Goodhue has made much money since he left college, or not. I don't know that I ever have thought of this before in connection with him. One looks for a higher success, than mere success in getting money, in a man like Goodhue. I have every reason to believe that he has lived happily up to his ideals. Judging from photographs sent me, he has, overlooking the sea, at Holualoa, Hawaii, a beautiful home, called "The Doctorage," and presumably sufficient money for his simple needs; and, really, that's all any man does need.

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There is no more pitiable wretch than the man who has mortgaged himself, soul and body, to money, in whom the desire to accumulate money has starved every other affection and desire. The poorest of all human beings is he who is rich in gold but intellectually and spiritually bankrupt.

Little that is truly noble can be expected from one whose chief object in life is the making of money. Though a man without money is poor, a man with nothing but money is ever so much poorer. He may enlarge his premises, but that very night his soul may be called away; and whatever monument with flattering title his heirs may erect over his grave, God will write this poor mortal's epitaph in one word of four letters —"Fool."

All the money you get is really only in the nature of a trust fund, which you are in duty bound to use as a steward, to better the condition of life of others as well as your own, and to make men and communities happier and more useful. Wealth cannot purchase pleasures of the highest sort. It is the heart, the taste, the judgment that determine the happiness of man and restore him to the highest form of being. Money cannot buy health, life, love or a happy hereafter. A great fortune is not necessary for the attainment of faith, hope or charity.

I know not how much the brothers Goodhue are worth in money, but I do know that they are worth more than almost any other of the doctors I know in all that goes to make the highest type of man.

Nature cannot be outraged with impunity; although a generous giver, she is a hard bargainer, and invariably, in the long run, the man who works too hard, who crowds the work of forty years into twenty, who burns his candle at both ends will find that he accomplishes less by attempting to overmatch or cheat nature, than by accepting her own terms. In all likelihood, the man who toils and moils at business, without relaxation or enjoyment, through the best years of life, with the hope of retiring at last and making the evening of life a holiday, will never retire, except into an untimely grave.

Vacations are the true safety-valves of professional and business men, and he who grants himself occasional rest not only will live longer, but will accomplish more than he who laboriously drudges from one year's end to the other.

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For the past several months in my work at Mudlavia I have heard nothing but "tales of wo" from "early morn till dewey eve," and I needed this vacation, that I might do more efficient work during the ensuing winter. It is needless to say that I shall visit no hospitals and, save a few hours' consultation with W. B. Saunders Company of Philadelphia, who this winter will bring out a big one-volume work of mine on the "Treatment of Disease," I shall not talk medicine or medical works with anyone, if I can avoid it.

I may play golf, some; I shall take some trips on the water; and I know that I shall visit art galleries, libraries and book-shops, and listen to good music—but visit hospitals, I should say not!

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Every person should have at least one side-issue or fad—an avocation—apart from his regular vocation. After one gives so much time every day to the routine of work, to turn aside for a while to something entirely different is restful and beneficial. No matter what our regular vocation may be, it is harmful to get into a rut, just simply going through a treadmill of duty, day after day, with no letup. One should always try to bring into each day some new activity, some new train of thought.

It is not a wise thing to get into a certain groove and just simply wear one's life away. Monotony kills quicker than anything else. We should have our daily duties, in which we are interested, put our energy and enthusiasm into this work, and do it with all our might. Then, when that is done, turn to some other activity, or else rest.

And we should have ideals both in our work and in our play. We all have ideals so far as our work goes, I presume; we all look forward to some day stepping out and up; to better our own conditions, to advance our business by some new thought, system or discovery. An ambition truly admirable, this, when honesty of purpose guides in the development.

But sadly true it is that selfishness cuts in, slowly at first, but to grow until it overpowers. Honesty of purpose becomes determination for gain, and the beauty of it all is swept away by the desire for wealth that will make ease and luxury possible.

Then, indeed, there is danger—for the temptation is great. Ambition is a sin when the mind becomes warped and twisted by selfishness. Its energies are bent toward shrewd, calculating sharpness. Honesty has become a secondary principle; friendship is an unknown quantity. Narrowness, treachery, and absolute dishonesty are factors often brought into active use in this great struggle for selfish ambition for success.

And this is true, that ambition today is for wealth and, with it, selfish ease and comforts. Sentiment can not exist, love and friendship are forgotten, and honesty is an afterthought far too often when "business is business."

Speed the day when all men, doctors and all, will cherish high ideals. The religion of high ideals is a grand one, and it could be so preached and practiced that Heaven would not be questioned and Hell would be a back number. Try it on!

AMONG the BOOKS

ROBINSON: "SEXUAL IMPOTENCE"

A Practical Treatise on the Causes, Symptoms, and Treatment of Sexual Impotence and Other Sexual Disorders in Men and Women. By Wm. J. Robinson, M. D., chief of the department of genitourinary diseases and dermatology, Bronx Hospital and Dispensary; editor, *American Journal of Urology*, and *The Critic and Guide*, and author of "Sexual Problems of Today," "Never-Told Tales," etc. New York: Critic and Guide Company, 1913. Price $3.00.

Every reader of CLINICAL MEDICINE is familiar with Doctor Robinson's ideas concerning the etiology of sexual impotence and the methods of treating this disorder. He is known to be a radical, so much of a radical, in fact, that every reader of his books seems to be either a warm adherent or a violent critic; he is necessarily partisan for him or against him. Any physician who reads this book will understand why there is such a difference of opinion concerning the merits of Dr. Robinson's views.

The matter is divided into eight parts, devoted, respectively, to masturbation, pollutions and spermatorrhea, sexual impotence in the male, sexual neurasthenia, sterility, sexual disorders of women, priapism, and, lastly, miscellaneous topics.

In these different chapters, Dr. Robinson finds opportunity to present certain pronounced views concerning the sex-problem that are characteristic of his work in this field. Thus, for instance, he looks upon masturbation, in spite of the fact of its almost universal existence, as one of the most important causes of impotence in the male; coitus interruptus he condemns in unsparing terms, saying that "no fact in medicine is more firmly established than the evil influence of this vice." The cure for the latter antisocial condition is some other, innocent, method of preventing conception.

But from this, it is readily seen that Doctor Robinson does not believe continence should always be practiced on the part of the male or too generally advised, even for the unmarried. His ideas, as set forth in this book and so often uttered elsewhere, lead to the belief that he holds that any form of repression or pseudoexpression of the sex-instinct must lead to sexual weakness.

Especially interesting are the chapters upon treatment. These are in every respect excellent and practical and cannot fail to be of service to any physician who has patients of this kind to treat—and who has not? The book is made more interesting through the introduction of numerous illustrations from practice. These cases are recounted in a graphic way, which gives them a peculiar grasp. Indeed, the entire book is written in that strong, straightforward conversational style which has made *The Critic and Guide* and all of Dr. Robinson's books so wonderfully popular with physician readers, and to a considerable extent with lay readers also.

We are firmly of the opinion that every physician, whether he agrees with Doctor Robinson or not, should read his books. They are thought-stimulating and cannot fail to be helpful in many points, even if very often the average reader will find much difficulty in accepting the author's views.

"THE PRACTICAL MEDICINE SERIES"

The Practical Medicine Series: Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M. D., professor of laryngology and rhinology, Chicago Postgraduate Medical School; assisted by Charles L. Mix, A. M., M. D., professor of physical diagnosis in the Northwestern University Medical School. Chicago: The Year Book Publishers. Series 1913. Price, per volume, $1.50; price of the series of ten volumes, $10.00.

We are in receipt of the first six volumes in this excellent series, these being devoted to general medicine, general surgery, the eye, ear, nose and throat, gynecology, pediatrics, and orthopedic surgery. The anteceding volumes in this series are now well known to

every reader of this journal, having been reviewed from year to year in these pages, so that it is not necessary to add anything regarding the general character of the work.

In every respect these volumes are fully up to the standard already set. The volumes on general medicine and general surgery are, naturally, of the greater interest to the average reader, although relatively little that is strikingly new has been added within the last year. Of especial interest is the chapter on tuberculosis, in Volume I, and the chapters on operative technic, tetanus, surgery of the blood-vessels, and the surgery of the abdomen, stomach, and intestines, in Volume II. No doubt the volumes on gynecology, eye, ear, nose and throat, pediatrics, and orthopedic surgery will be found equally interesting by those especially interested in these specialties. The reviewer especially enjoyed the review on infant feeding and gastrointestinal diseases, in the volume on pediatrics. This series is one which the doctor should procure every year.

DAWSON: "RIGHT OF CHILD TO BE WELL-BORN"

The Right of the Child to be Well-Born. By George E. Dawson, Ph. D., professor of psychology, Hartford School of Religious Pedagogy. New York and London: The Funk & Wagnalls Company. 1912. Price 75 cents.

If this is the kind of mental food that is habitually being served up to the students of the Hartford School of Religious Pedagogy, then that institution ought to be turning out a pretty high quality of religious educators; and it is well, indeed, that somebody persuaded Doctor Dawson of the desirability of projecting his voice beyond the limited confines of his lecture-room into the public forum. And it is a clear and unmistakable voice. It breathes virile sanity and sound common sense from start to finish. Doctor Dawson knows what he wants to say, and knows how to say it; furthermore, what he says is worth while, decidedly.

The book may, in fact, be said to be the practical clearing-house of all that has thus far been uttered on the subject of eugenics. The ultimate touchstone of all science and philosophy, of course, is its capacity for utilitarian application. Doctor Dawson evidently has applied this touchstone, with hard-headed discrimination, to all the mass of theories and facts that eugenistic researchers and speculators have been piling up in recent years, set forth the result in this little book.

To those who are interested in the research and speculative processes, to be sure, the book will make no particular appeal. But to that growing number who desire to put into practice so much of eugenic teachings as meets the practical test, it will furnish a trustworthy guide to what constitute the proven things in a clear instruction for applying them.

PETTEY: "NARCOTIC DRUG DISEASES"

Narcotic Drug Diseases and Allied Ailments: Pathology, Pathogenesis, and Treatment. By George E. Pettey, M. D., member of the American Medical Association, The Society for the Study of Alcohol and Allied Diseases, etc. Philadelphia: The F. A. Davis Company. Price $5.00.

There is probably no one in this country who is so well qualified to speak with authority upon the narcotic-drug diseases as Dr. Pettey. He has had clinical experience with more than three thousand patients of this class, he has been an exceptionally careful observer, and he has studied both his patients and their reaction to the appropriate remedial agents as no other physician in this or any other country has done, so far as we are able to ascertain. It is not surprising, therefore, that Dr. Pettey has uncovered a goodly number of fallacious views concerning drug-diseases and drug-habits and has placed their treatment on a fairly scientific basis.

Among other things, Dr. Pettey tells us that the excessive use of morphine is not a "habit," as we understand that word; that it is not a neurosis; that the morphine-addict is not a "pervert" or a "degenerate"; and that such a one is not inveterately untruthful. Morphine-addiction, Dr. Pettey tells us, is purely and solely a toxemia, and as such belongs to the field of internal medicine; and, also, it is a toxemia of pharmacogenetic, intestinal, and autogenetic origin. It is the recognition of its toxemic nature which furnishes the key to the treatment that has been employed with eminent success by Dr. Pettey for many years.

Briefly speaking, the method of treatment advised is begun with a course of thorough purgation, after a preliminary hot bath, and the free use of drinking-water, to flush the kidneys. Various purgative combinations are employed, but one containing calomel, cascara, ipecac, strychnine, and atropine

seems to be the favorite. This is followed in six or eight hours after the final dose with large hypodermic injections of strychnine, and a saline laxative or castor oil.

After this preparation, comes a period of rest, during which it is possible to reduce the quantity of morphine, as a result of the cleanout process. When the patient has gone as long as possible after this without discomfort and begins to feel the need of the narcotic drug, it is now given him in reduced dosage. Forty-eight hours after the first purgative dose another, similar, course of elimination is gone through with. After such a thorough cleanout the craving for the regular allowance of morphine is always greatly reduced.

At this stage, when the patient once more begins to demand his narcotic, he is given 1-200 grain of hyoscine; this to be repeated in thirty minutes. This dose may be increased or diminished, according to the patient's insistence, and is given at sufficient intervals to keep him free from pain. Meanwhile, small doses of sodium hyposulphite are given every two hours, while the heart action is maintained by means of sparteine sulphate, which is given in 2-grain doses every four to six hours.

Strychnine is always administered by Dr. Pettey, and in unusually large doses. This remedy is given mainly for the purpose of restoring and maintaining the function of the intestinal muscles, which are semiparetic, as a result of the long course of drug-habituation.

Cases are reported by Pettey in which the strychnine was given in 1-8 to 1-4 grain doses, every two hours, until one full grain, all told, had been given, and, yet, no discomfort was experienced by the patient; while, on the contrary, by maintaining the bowel tone, the griping, diarrhea, vomiting, and other symptoms of abdominal distress experienced by these patients were kept under control.

Dr. Pettey does not regard hyoscine in any sense as a specific or a "cure" for the morphine-habit. However, in his opinion it does fill "as important a place in the treatment of morphinism as does chloroform or ether in the practice of surgery." Its object is the same as that of giving anesthetics in surgical operations—to prevent pain. Elimination, however, is the one essential and all-important factor in the successful treatment of morphinism.

When the methods described by Dr. Pettey are carried through carefully, usually in five or six days, the patient is convalescent—not well, however, for a considerable further period of careful treatment is necessary to build him up and restore him to health.

It is refreshing to read Dr. Pettey's drug studies, in which the book is particularly rich. Readers of CLINICAL MEDICINE already have had the privilege of perusing some of the chapters in this book devoted to the use of purgative remedies. Some of this material appeared in our Journal in the numbers for January and February of this year.

The doctor's ideas regarding the use of strychnine and sparteine, of gelseminine, pilocarpine, and other remedies—many of them alkaloidal—are sound, scientific, and built upon years of successful experience. Whether a physician treats the drug-habits or not, he cannot read this book without gathering from almost every page something that will be of distinct service to him in the management of diseases of all kinds.

Naturally, most of this book is given up to the discussion of the morphine-habit. Every phase of this subject is considered, and it is intensely interesting all the way through.

The reviewer was much interested in the sketch of the narcotic experiences of De Quincey; also in the study of the various methods of treatment of the morphine-habit, which have been used from time to time, among them, Lambert's alleged specific, much vaunted in recent years in *The Journal of the American Medical Association* and elsewhere.

Comparatively little space is devoted to cocaine and alcohol, enough, however, to give a very clear idea of the methods of treatment employed by the author. We should like to refer to these in detail, but the space at our disposal is limited.

Rarely have we seen a book so well worth the consideration of the physician, so deserving of study, and so useful an addition to the physician's library.

DELEE'S "OBSTETRICS": A CORRECTION

Through some error the price of DeLee's "Obstetrics" published by W. B. Saunders Company, Philadelphia, is given as $9.50 in the review of this book, appearing in the August number of CLINICAL MEDICINE, page 699. The actual price of the book, cloth bound, is $8.00.

We are glad of the opportunity to call attention again to the merit of this excellent work.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5949.—"Melanoderma." E. R., South Dakota, has under observation a peculiar case and desires help in making the diagnosis. The patient is a girl ten years old and of normal development. In the second year after the child's birth a dark coloration of the lips appeared, the pigmentation gradually extending until now her entire face is black like a negro's. However, there is no negro blood in either the parents' or their ancestors' veins. The child's body is white, but the hands and arms also have become a dark coffee color. She is also troubled with shortness of breath, mitral regurgitation, is rather inactive, likes to sit still, and never goes away from home. The parents came from the Netherlands and have been in this country only three years; they never saw a negro before coming here.

The pigmentation described is known as melanoderma (also as melasma, hyperchromia, etc.), but just what causes it in this case we confess ourselves unable to conjecture from our correspondent's report. Melanoderma, of the common "patchy" variety, is not unusual, the pigmentary discoloration often being intense on the face and neck; also, the axillæ, genitocrural region and nipples are usually involved.

Melanoderma is, of course, not a disease *sui generis*, but the symptom of some definite condition, often systemic or organic, and among the primary diseases causing it we may mention tuberculosis, syphilis, cancer, Graves's disease, uteroovarian disease, and malaria. Apparently all these may be excluded in this instance. In some respects the symptoms suggest Addison's disease, in which there is the same history of asthenia, heart weakness, and skin pigmentation—the latter occasionally being intense enough to make the patient look like a negro.

In Addison's disease, the discoloration begins first on the exposed portions of the body, and is likely to be most intense in these localities. There is great lassitude, loss of physical and mental energy, headache, dizziness, and more or less loss of appetite, and disturbances of digestion, such as nausea, vomiting, and diarrhea. Addison's disease usually is fatal, and only rarely is it prolonged for eight or ten years. Also, it occurs most often between the ages of fifteen and forty. However, it is worth considering in this instance.

It is barely possible that this child, at some time, has received a prolonged course of treatment with silver or arsenic, which cause skin pigmentation; however, in such cases the pigmentation generally is diffuse. A mitral lesion might cause cyanosis and ultimately some darkening of the skin, but certainly not the intense pigmentation described.

Evidently this is a rare case, and it certainly is an interesting one. We would strongly urge a most thorough examination of the child, and that the blood be studied with care. We should very much like to have a photograph of this child and all the data that can be obtained. Then we shall be in a position to study the question more intelligently.

LATER.—Since this was written we have received photographs of this girl from the doctor, which have been referred to Dr. Sajous of Philadelphia, who has given us an interesting opinion on the case, which will be printed next month.

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QUERY 5950.—"He Would 'Operate for Appendicitis.'" W. S. W., Georgia, tells us that he has never performed the operation for appendicitis, and wishes we would give him (in detail) the exact method of operation, and continues:

"How long must the incision through the abdomen be and in what location? Be exact,

please. What is the antiseptic technic—*in detail?* How are the dressings arranged and the drainage-tubes placed, and what is best material for the same? Don't leave me to presume anything about it, from start to finish, but give everything in full, please. Is there any previous preparation of the patient in the way of dieting, bowel flushing, etc.? Give me the technic when pus is present and when it is not. I wish to know it all, from start to finish."

Frankly, doctor, we would most earnestly advise you *not* to attempt doing an appendectomy. We can readily see, as you state, that you know nothing whatever of this work, and it would be highly dangerous —yes, improper—for you to attempt the operation. You would most certainly lay yourself open to a suit for malpractice.

We do not understand, however, why it is that you "fail to find the desired information" in your textbooks, as you declare, when every work on surgery devotes considerable space to this subject. Under the circumstances, you readily will see that it is out of the question to cover the entire subject, when the answer can be found by consulting any good work on surgery, as for instance the "American Textbook of Surgery," Mumford's "Practice of Surgery," Keen's or Bull's "Surgery," or even Wharton's "Minor and Operative Surgery," where you will find every step of the various operations not only described but illustrated. However, before closing, let us once more urge upon you the great danger of attempting to operate upon a living human being without first having every step demonstrated by a competent surgeon. Occasionally appendectomy is a very simple operation, but all sorts of difficulties may be encountered when the abdomen is opened, and the operator must be prepared for anything.

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QUERY 5951.—"Thiosinamin as Solvent of Scar-Tissue." L. M. B., Texas, desires to use thiosinamin as a solvent of scar-tissue and wants to know what is the most effective and safest preparation.

Thiosinamin is a synthetic (allyl-sulphocarbamide) derived from the volatile oil of mustard-seed. It occurs in the form of colorless crystals soluble in 30 parts of water, and readily soluble in alcohol and in ether. The average dose is 1-2 to 1 grain three times daily, although, if the stomach is not disordered, as much as 3 grains may be taken.

After the hypodermic injection of a thiosinamin solution, the surrounding tissues usually become somewhat congested, frequently there is an increase in the quantity of urine, and very rarely nausea and vomiting occur. Sometimes, also, it produces a reaction similar to that caused by tuberculin. It is well to remember that thiosinamin should not be injected *into* cicatricial tissue.

The effect of thiosinamin upon scar-tissue is unique. When injected subcutaneously as well as when given by the mouth, it causes a local reaction in the scar area, and the cicatricial tissue undergoes more or less resolution and is absorbed.

After a hypodermic injection, the irritative effect is produced in a few hours, but when given by the mouth the impression is less pronounced. The visual effect from a single dose lasts about five hours.

As for the "most satisfactory preparation," that, in our opinion, is perhaps what is known as thiosinamin compound, a glyceroaqueous solution with antipyrin. It is a powerful resolvent of cicatricial tissue, especially of the "fleshy," blood-filled type. Although valuable when taken internally, best and most definite results are secured from the hypodermic administration.

"Its use," to quote from one authority, "is indicated in stricture, corneal opacity, deafness due to adhesions, lupus, glandular tumors, and where it is desirable to resolve cicatricial masses and adhesions in any situation. Even keloid has yielded to its persistent use.

"Technic: Cleanse the skin over the injection-area (the glutei or the loose tissues of the anterior abdomen should be selected) thoroughly with alcohol. Then with a sterile all glass syringe and sterilized needle inject the solution slowly. Do not massage the tissues. Inject on opposite sides of the body, every second or third day, alternately.

"Internally: 5 to 10 drops, twice daily, in a weak alcoholic vehicle, continued until the desired results are obtained.

"Hypodermically: 6 to 12 minims, every third day.

"Note: Cloudy solutions showing precipitation and not cleared by warming should not be injected, but may be used orally without detriment.

"Whenever thiosinamin is used, elimination should be stimulated, and arsenic in some form (preferably the iodide) given in full doses."

Intramuscular injections of such a properly prepared solution are comparatively painless.

Thiosinamin injections have been found very satisfactory also in lupus, and recently

Doctor Abrams has reported two cases of endocarditis in which the drug used subcutaneously, effected a cure.

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QUERY 5952.—"Spina Bifida." "Finger Paralysis Following Fracture of the Humerus." R. H., Nebraska, writes as follows: "During nine months of most encouraging alkaloidal practice I have had to contend with several serious conditions, such as may at any time surprise a country doctor unawares. I present two for your consideration.

"1. Confinement case. Everything normal, but the infant has meningocele in the lumbar region; spinous processes absent; a thin glistening arachnoid membrane is all that covers the cord posteriorly; size of the membrane about 2 1-2 inches in diameter, a little bulging at birth; the child's legs very active and strong; abnormal flexion of the spine permissible at that point. Otherwise the child is in good health.

"Treatment (probably original): Slight stimulation with iodine; later, applications of wet bichloride gauze, to preserve asepsis. On the fourth day the child seems healthy; the bulging is greater, however, and a reddish granular tissue has covered the membrane, excepting a space the size of a half-dollar coin. Owing to a slight oozing of spinal fluid, no surgical intervention was attempted.

"What is the prognosis and treatment? Should one seek to obtain scar-tissue, to protect the cord until an operation could be performed later? Is spina bifida amenable to immediate treatment?

"2. A parent comes into the office, saying: 'My children have been bitten by a mad dog, and I want to do all that is best for them.' From the symptoms related concerning the dog's action (the dog having been killed immediately), he *was* 'mad'—a strange dog traveling a long distance; but I am not sure whether it was rabies the beast was suffering from. The dog's head was sent to the nearest institution, and the Pasteur treatment commenced on the children, for home administration. What better course could the doctor pursue?

"3. A girl of six years fractured her thigh and her humerus just below the deltoid insertion. Five weeks later she discovered an inability to extend her thumb and fingers. Wanted: information as to cause.

"These are all questions that may at any time come before a practitioner, and, yet, in the library of the ordinary doctor very little if, any at all, is presented."

In your case of spina bifida, surgical procedure is essential; rarely, in these days, is the injection-method employed. Morton's fluid, a composition containing 10 grains of iodine, 30 grains of potassium iodide, and 1 ounce of glycerine, has been favorably regarded, two or three injections being given at intervals of ten days. First of all, an ounce or more of cerebrospinal fluid is withdrawn; then 1-2 ounce of Morton's mixture is injected. However, very few men speak enthusiastically of this procedure.

If the spina bifida is a pure meningocele, the operation is rendered easier through the absence of nervous elements. The sac is exposed and trimmed away through a transverse crescentic skin incision that compasses the base of the tumor, with the convexity of the incision downward. The technic is fully described in any modern work on surgery.

Generally the abnormal window in the bone is small; only rarely the whole of the bony sheath on one side of the cord is absent. In all cases, of course, the prognosis and the possibility of treatment depend upon with what particular variety one has to deal. Of these, there are three; namely: (1) Meningocele, containing membranes and fluid only. Comparatively rare. (2) Meningomyelocele, the membranes, fluid and cord including the cauda equina. (3) Syringomyelocele, a special form of meningomyelocele, with a great dilatation of the central canal and its ependyma.

The subvarieties are numerous. For instance, there are three forms of meningocele. In the simplest, the defect is in the bone alone; the skin, membranes, and cord are intact; and the tumor is composed of the dura mater, this, with its contained fluid, bulging through the bone cleft. In another subvariety, the dura mater as well, as the bone, is cleft. The arachnoid, with its fluid, bulges through this opening, but the skin, pia mater and cord are normal and intact.

Operation shows a reasonable percentage of good results; still, after all is done, it must be remembered that the outcome is doubtful until firm union has been established. The wound may break down and a spinal fistula become established, with the constant attendant danger of infection.

We must remember that myelocele—a deformity characterized by a cleft in the skin itself, an opening in the posterior bony wall of the spinal column and in all the membranes, while the posterior surface of the cord itself is split or absent—is inoperable and

usually results fatally early from septic infection.

In syringomyelocele, the bony wall and the dura mater are cleft, but the arachnoid and pia mater are intact; the central canal being distended with cerebrospinal fluid. The resultant hernia is composed of skin, arachnoid, pia mater, and nerve-elements, the center of the mass being occupied by cerebrospinal fluid.

Myeloceles must be regarded as surgical curiosities. They are commonly associated with other abnormalities—hydrocephalus, club-foot, exstrophy of the bladder, etc.

You will find a very interesting chapter on this subject in Mumford's "Practice of Surgery."

2. The child having been bitten by a presumably rabid dog requires immediate treatment, i. e., the wound should be freely opened, suction applied, and the tissues cauterized. If at all possible, the dog should be kept alive and under observation for a week. If the animal remains well, there is no rabies; if it dies, brain- and nerve-tissue changes enable us to make a positive diagnosis. In all suspicious cases, the patient should be placed upon the Pasteur treatment at the earliest possible moment.

After the wound has received proper treatment the patient should be given a brisk purge and then receive full doses of nuclein and of echinacea; potassium permanganate or thuja and echinacea may be applied, on compresses, to the wound.

The patient should be reassured. Really, many individuals die from simple fright, and half the dogs who are supposed to be rabid are not affected at all.

3. Paralysis resulting from injury to the nerves at the site of fracture may disappear; it is best to wait developments for a few weeks in primary cases. Massage the limb daily in the meanwhile and exercise the involved extremities. If function does not return, the nerve should be explored, and isolated; if torn, it should be sutured; if compressed, released. In fractures of the humerus, the circumflex, median, ulnar or musculopspiral nerves may be injured; in this case, probably the median.

Do not forget that the nerve may have been severed by the accident, or interposed between fragments or compressed by a displaced fragment or callous.

Besides paralysis of the muscles supplied by the injured nerve, disturbances of sensation in the cutaneous area supplied by it may be observed. Some simple paresthesia or complete anesthesia may be noted. The extent of the latter seldom corresponds exactly to the area supplied by the affected nerve. If the nerve is compressed, there often is severe pain; if it is completely severed, there is no response to galvanic and faradic stimulation after the second week. The affected muscles show an absence of faradic but an increase of galvanic reaction.

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QUERY 5953.—"Extrauterine Fetation." D. M. McD., West Indies, asks advice as to the best time to operate for ectopic pregnancy upon a young woman nineteen years old, seven months pregnant, in first pregnancy. The fetus is entirely free in the abdomen. All the limbs can be easily felt, just beneath the abdominal walls. The uterus can be felt separate and is quite small. The fetus is alive and kicking freely.

Ectopic gestation, we hardly need say, is a highly dangerous condition. When the fetus continues to grow after rupture of the sac, it is a very serious question as to how the case should be managed.

First of all, bear in mind that, under such circumstances, the fetus is much more frequently the subject of defective development than when it develops within the womb. The possibility, even probability, of delivering a deformed child, in connection with the increased danger to the patient from continuation of this abnormal pregnancy, usually renders early interference desirable. Once, however, the fetus reaches the viable age, it may be judged best to afford it an opportunity to live.

The danger from a vital placenta is to be considered; for, its attachment may be such as to involve coils of the intestine or large vessels and, so, its removal be attended with tremendous, even fatal, hemorrhage. Where the placenta is situated inside the sac, so as to permit the removal of both, this should be the operation of election. Where the situation of the placenta is such that it may not be removed, the sac should be packed with gauze, united to the abdominal wound and treatment conducted extraperitoneally. Under the pressure of the gauze, vitality may cease and gradual destruction follow. Or, also, as much of the sac as possible may be removed and the remainder ligated near the placenta, the cord removed, and the abdominal wound closed.

Should the operation terminate favorably, the placenta will be gradually absorbed and disappear. If changes take place, the ma-

terial may be evacuated through a vaginal incision.

The removal of the fetus and the placenta some time after death has taken place is attended with much less danger, for the reason that the latter, no longer being living, is more readily separated without fear of hemorrhage. Should the sac remain any length of time, it may undergo calcareous alteration, when its removal often is accomplished with great difficulty.

Under such circumstances, a mummified or macerated fetus should be removed and the sac attached to the abdominal wall and drained, and its cavity thus finally obliterated.

If possible, doctor, look up this subject in Keen's "Surgery" or in one of the more recent works on obstetric surgery. At all events, a very serious condition confronts you, and you should get the best available assistance.

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QUERY 5954. — "Recent Carbolic - Acid Burn." H. L. H., Texas, recently treated a man who had the misfortune to have a 4-ounce bottle of phenol broken in his hands. The fluid splashed over one side of his face, both arms and the chest. He called to his wife for alcohol and ran to a nearby well, but his wife, being excited, did not get the alcohol until the doctor reached him—about two minutes later. The doctor applied the alcohol, washed off the phenol with soapy water, again applied alcohol, then ice, then applied dressings of mentholated vaseline, cocaine (4 percent solution), fluid extract of belladonna, and also tried hot-water applications. The hot-water applications seemed to relieve the burning (which was almost unbearable for five hours) more than anything else. Our correspondent asks: "Was there anything that I could have applied locally which would have relieved the burning?"

Your patient made a great mistake in the premises in applying water. Had the alcohol been used freely at once, there would have been little, if any, cauterizing, and then the subsequent application of a little mentholated petrolatum or orthoform or camphor-menthol would have controlled any distress possibly resulting. The ice was not a desirable application. We also doubt the applicability of cocaine or belladonna. You have not told whether the skin was destroyed, or not. You know, of course, that obstinate superficial ulceration often follows the application of phenol.

QUERY 5955.—"Chronic Empyema." C. F., North Carolina, describes an interesting case. The patient, a boy four years old now, at the age of two fell from the top of one chair across the rounds of another. In twenty-four hours the left side of his chest was considerably swollen; intense pain was complained of, and he coughed continually. He was treated for pneumonia, but there was no relief; then for a while for pleuritis, with same negative result. After that, the child passed through the hands of other doctors. Still no relief. Our correspondent first saw this patient in November, 1912. He then was robust, with well-developed muscles and his general health good, except for a "cake" in his side that caused severe pain, troublesome coughing and difficult breathing.

The Doctor prescribed tonics, poultices, ointments, and embrocations. Last spring the boy began to emaciate and "more prominent indications of a local trouble were observed," until in July an abscess formed, this finally rupturing and discharging an immense amount of a thin, whitish, purulent matter. Then a broken rib, with ends overlapping at least 1 1-2 inches, could be accurately diagnosed. The pus, the Doctor thinks, comes from the sharp spicules about the outer ends of the fractured bone. At present a pint of pus is discharged daily from four small perforations, and spurts out from them whenever the child coughs or frets; while the child sometimes even vomits some of the same purulent fluid.

Now our correspondent asks: "What will it do, and what must I do, barring an operation? I am meeting general demands with the alkaloids (to which I attribute his remarkable clinging to life, nature aiding by throwing off this immense amount of poisonous pus) and use some hydrogen peroxide externally, but am afraid to inject it into this cavity."

Without commenting upon the extraordinary lack of diagnostic acumen in the physicians who treated this little fellow prior to November, 1912, we must frankly state that you yourself missed an opportunity to secure a therapeutic triumph.

You are dealing, of course, with chronic empyema, specifically, pyothorax. It is not improbable that a simple 2-inch incision parallel with the rib, evacuation of the pus and insertion of a drainage-tube would have proved curative several months ago.

Of course you are aware that there is a vast difference between acute and chronic empyema, and that the treatment is correspondingly radically different.

In chronic empyema, the pleuræ have become thickened, these membranes assuming the appearance of tough envelopes that encircle the pus-cavities lining the chest-walls and covering the surface of the lung.

Hence, it is clear that the mere aspiration or simple drainage of such a cavity cannot bring about a permanent cure, the stiff wall of the cyst remaining after drainage, holding the lung away from the chest and persisting as a pus-secreting membrane.

There is one chance of saving this little fellow's life, and that is, to place him immediately in the hands of a competent surgeon who will perform either the Estlander, a Schede or Fowler operation. As probably there exists necrosis of one or more ribs, liberal resection of these is essential.

The unfortunate feature of the case is, that the surgeon will now be confronted by a patient greatly weakened by long-continued illness, necessitating that he proceed cautiously. Furthermore, a greater or less deformity of the chest will unavoidably result, and the child go through life with a crippled lung and certainly a depressed vitality.

Even now, however, you may be able to turn the tide, save the child, and make a reputation for yourself, by insisting upon immediate operation. Any other procedure is absolutely useless, especially as penetration of the bronchus has taken place. Do not, doctor, lose any more time!

In the treatment of *all* empyemas, the presence of pus should be ascertained promptly and the moment it is discovered drainage should be instituted. If examination of the chest reveals physical signs of the presence of fluid the nature of which is not apparent, aspirate at once and, if pus is discovered, drain immediately.

Acute empyema treated early is not necessarily a serious condition, but chronic empyema most certainly is. Still, if acute empyema were recognized and promptly properly operated upon, chronic empyema would cease to exist.

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QUERY 5956.—"Stab-Wound of the Lung." O. H. S., Indiana, wishes to know how deep a knife would have to go to penetrate the lung posteriorly; the subject being a medium-sized man and not fleshy? Also, how one can tell when the lung is wounded. Would there be a frothy discharge about the wound?

We regret that you did not give a more definite description of the location of the wound. However, your knowledge of anatomy will enable you to understand that a knife-blade entering near or below the point of the scapula through the latissimus and serratus muscle would have a much less distance to travel to penetrate the lung than it would were it inserted nearer the vertebra, where it might enter the thoracic cavity without wounding the lung. It would be possible, therefore, to reach the lung in the right or left infrascapular region with a 2 1-2-inch blade, whereas in a well-developed man it would take a 3 1-2-inch blade in the interscapular region or the median line.

Remember that the lower limit of the pleura diaphragmatically lies from 1 1-2 to 2 cm. above the costal attachment of the diaphragm, while the lower sharp margin of the lung lies about the same distance above the bottom of the sinus; hence, during expiration a knife entering this area would miss the lung. During deep inspiration the lung descends to the bottom of the space.

The diagnosis of a penetrating wound of the thoracic cavity generally is easy, although in certain instances it may be exceedingly difficult to make. When the lung is injured, there will be cough and in the majority of instances bloody expectoration, with localized pain on respiration, and the development, later, of pneumonia and emphysema. Should air enter the pleural cavity, there may be more or less dyspnea, rapid respiration, and hyperresonance upon percussion. Therefore, frothy bloody expectoration is a distinct evidence of penetration of the lung. It must be remembered also that, if bleeding has occurred, it usually is troublesome; there also will be flatness over the most dependent part of the chest, besides absence of fremitus and respiratory sounds.

With a clearer idea about the location and extent of the wound and its probable direction, together with a knowledge of subsequent conditions in the patient, we may be in a position to comment more intelligently.

The main thing to keep in mind, however, in dealing with pus-cavities anywhere in the body, is to evacuate the pus. This rule applies when the deposit is found within the thorax just the same as when it lies beneath the skin. The difference lies in the greater difficulty in performance and the by no means easy task of removing the source of pus production. However, do not forget that after the cavity is emptied bacterins are usually indicated. To get best results it is necessary to know the kind of microorganism causing the trouble.

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The War On the Quacks

THE *Chicago Tribune* has just been publishing an exposé of the methods and practices of some of the more prominent of the quack doctors that infest this big city. One of its reporters, holding himself out as a patient, visited the offices of these medical frauds, and gave to the public an unvarnished account of his experiences, through the columns of the paper.

The gist of this investigator's report in each case was about the same; namely, that the charlatan had put him through a more or less cut-and-dried routine of questions, and, without making any physical examination, had informed him that he was suffering from some serious disease (usually one of the genitourinary diseases, most often syphilis, being named) and of which, he had assured him, he could cure him, for a consideration.

The consideration, of course, was the main issue. As the reporter said, in one of his typical narratives, when he (the putative prospective patient) hesitated on the possibility of raising the necessary amount of money for treatment, each little hair on the quack's head flattened down, like the feathers on a damp duck; but as soon as he pretended recalling a friend from whom he was sure he could borrow the required sum the doctor's golden furze again glistened and bristled with interest and animation.

To me, the reports themselves are not so significant as the comments which I heard made on them—which, indeed, I purposely elicited by questioning both laymen and physicians. The former, almost to a man, made light of the matter, rather admired the business shrewdness of the quack, and laid most of the blame on the victim.

"Oh well," they said, "if anyone is fool enough to put himself in the lion's claws, he must expect to get fleeced. You know what P. T. Barnum thought about the American people. The folks that go to these quacks would be disappointed if they were not buncoed, and would go the rounds until they found someone kind enough to 'soak' them."

The comment of the physician is still more significant. He laughs a cynical laugh, and winks the other eye.

"Shucks!" he says, confidentially, "you and I know that the quack is doing just about what the regular physician does—in a little ranker, coarser way, that's all. If the reporter were to pay similar visits to reputable physicians' offices, his experience would be a good deal the same, in kind, although perhaps not in degree. We all aim to get a fee out of a patient before he gets away from us, don't we?"

That is the actual substance of the remarks made to me by most of the medical men whom I questioned.

What does this mean? Is there such a rotten, unscrupulous, grafting state of affairs in the ranks of real medicine as those comments would seem to indicate? I do not think so. Their answers simply express, in rather extravagant fashion, the doctor's keen perception of a certain paradoxical condition that constitutes the weakest spot in the whole fabric of medicine, the rock of stumbling in medical economics.

This overreaching rapacity of the quack, in practice, of course, is an outrage upon decency; but, considered psychologically, philosophically, it is an overgrowth, a lop-sided excrescence, from this same organic weakness. The trouble is, that in medicine the interests of the physician and those of his patient run counter to each other. To reduce it to terms of the physician alone, his professional obligations and his economic interests run counter to each other.

In no other calling is that true as it is in medicine. In a certain sense and degree, it obtains in law; but not in the same sense or degree; for it is well established that to keep one's client out of court is just as valuable a service as to win his suit, and is paid for just as highly, and many lawyers are engaged by the year for the express purpose of avoiding legal trouble.

But when and where can a physician collect the same fee for preventing an attack of typhoid fever or obviating a surgical operation that he can get for several weeks' attendance upon a typhoid case or for performing an appendectomy?

This is an unnatural state of affairs, a psychologic and economic anomaly, against which the human nature of the doctor is obliged to make a constant unnatural fight. In every other line of industry this attitude and conduct of the quack, which rightly provokes the excoriation of the public press, is, in kind at least, not only legitimate but commendable. It is simply shrewd business, good salesmanship.

If a man enters a store, when he has no need of an inkstand, doesn't want to buy an inkstand, and in fact resents the suggestion of purchasing such a commodity, there is absolutely nothing immoral in persuading him that an inkstand is the one thing in life that he cannot do without and to induce him to give up his money for one. That is good salesmanship, excellent salesmanship. And to the greater extent that he can be induced to go on spending his money in that establishment, the better the salesmanship.

But the physician may not only not induce his patient to spend his money with him, confining himself to the actual necessity of the situation, but must positively cut short that necessity as quickly and effectually as possible, applying the skill and learning which are his economic stock in trade to that end. Yet, the physician is exactly as human as is the business man, and is equally seeking a livelihood through the practice of his honorable calling.

I repeat, this condition is a weak spot in the economics of medicine and one which I am inclined to think cannot much longer endure. It imposes a greater strain on human nature than the physician, alone of all classes of workers, should be called upon to bear. That he has hitherto borne and outridden it nobly does not make it the less hard and unjust. Besides, it is against public policy.

Just how this injustice is to be remedied I am not quite prepared to say. Perhaps it will work itself out under the growing influence of preventive medicine. Already the big rewards in medicine are being diverted from the men who cure to the men who prevent sickness. Possibly this principle will eventually extend itself all down the line, so that the value of medical service and the grading of the fee will ultimately not only be in accordance with the pleasantness and safety with which we cure diseases, but with the quickness—the quickest way being, of course, to head sickness off altogether, the next to jugulate it, and so on.

The real revolution will come, I suppose, when the public awakens to its interest in the question, and takes a hand in it.

It is tragic how few people ever "possess their souls before they die." "Nothing is more rare in any man," says Emerson, "than an act of his own." It is quite true. Most people are other people.—Oscar Wilde. It is true. How few men there are who are brave enough to let the narrow current of restricted thought sweep by while they battle against the stream; strong enough to be masters of their own souls.

THE ANNUAL TEST-RIDE FOR ARMY OFFICERS

Honorable Lindley M. Garrison, Secretary of War, has shown such commendable common sense in many of his orders for the Government and guidance of the Army that we earnestly hope he will shortly recall or modify the executive order, which requires all staff-officers ranking as major or above to take a test-ride, each year, of ninety miles, thirty miles per day on three successive days, under specified conditions as to gaits, time allowed for completion of test, etc.

This order, the issuance of which showed a marked ignorance of the first principle of human physiology and the conservation of valuable human effort, is said to have followed the refusal of a high ranking cavalry officer, much his senior in age, to keep up with the then President on one of his break-neck rides from Fort Myer, Va.—rides one does not care to contemplate either from the rider's or the mount's viewpoint—on a par

with the automobile fiend we all fear.

The announced object of this test-ride was for the purpose of compelling staff officers to keep in constant physical trim, to be always on a par with line officers engaged actively with the troops. They were detailed to spend long arduous hours at clerical work requiring high technical skill and exhausting mental effort; and, yet, notwithstanding this, they must, forsooth, not grow old or gain in weight, or allow muscle to soften in the least. From the physiologist's viewpoint, the order is, in reality, simply a cruel and inhuman method of elimination and forcing the retirement of aged or physically disabled officers.

Without question, this test fills the bill to perfection, in many cases its severity bringing to light physical ailments; conditions which under ordinary care would permit of many years of usefulness and enjoyment, but which after being subjected to the severities of this test are lighted up and the life of the affected individual in many cases shortened; or conditions of ill health or invalidism are established that rob the officer of his few remaining years of retirement, which he has every right to expect to be pleasurable or at least comfortable.

The service would be vastly improved by the forced retirement of many incapacitated or inefficient officers, but, in the name of humanity and decency, a method of elimination can, and should be established that is not positively cruel and one which so often is followed by disabled organs and ill health.

The brain of a highly trained army officer is incomparably more valuable to the service than his ability to sit in the saddle for ninety miles—something that only the most remote contingency of modern warfare might require of him; and, were it required, he would undoubtedly be able, under the necessity and excitement, to carry it out just as well as he now does as a test.

By all means, let us have a physically efficient staff, but as midlife is reached—and especially in the strenuous calling of the soldier—those who have the welfare of our military officers in their keeping should not forget that many organic changes take place, especially in the circulatory and excretory organs, which demand less violent exercise.

Severe criticism would be the lot of any physician in private life who would uphold such strenuous activity for men of fifty or above. Our officers who have no say in the matter deserve the same thoughtful consideration.

We hope our clear-headed and practical Secretary of War will arrange a more humane method of elimination.

I look forward to the time, which has indeed already partially come, when the family doctor will be engaged in advising as to means of preventing disease, in dissuading from habits inimical to health in preventing overwork or laziness—both serious enemies of mankind—in reporting external conditions, whether of work or leisure needing to be amended, and still more often in discovering the early symptoms of illness which if neglected, may produce serious disease, and in securing the removal of their cause.—Right Hon. John Burns.

A MONOLOG ON "GERMS"

The World yawned, and from every seismograph flashed the warning of an earthquake. He fell to meditating.

"Yes, I must be growing old. I'm getting very bald, alopecia areata Doc calls it and says it's parasitic. Wonder if he is right. He generally is. Told me once to take a bath and kill off the pesky creatures. I did so. Sure enough, my hair grew out again and the dry spots got moist. Never felt like repeating that bath, though. Too wet. Wonder if this itching is due to those bugs."

Old World scratched himself, and next day's journal told of the terrible tornado.

"Just feels as if something were burrowing in my skin. Doc says it's all outside: they never get down to where I live—too hot for that sort of bugs there. Funny, how the little codgers can't stand heat. That last boil that busted, Aetna they call it, killed swarms of them. Thought one of 'em got to my head the other day when I had taken off my ice-cap for a moment. If so, he didn't stay.

"If there are germs, they surely are pestiferous. They have run me bald in patches, criss-crossed with all sorts of little lines and tracks, big lumps of scales and scabs here and there, and any number of little hot pimples all over me. Now and then there is a red fiery flush goes over part of my skin—erysipelas Doc calls it, and he says that's due to bugs also. I suppose these black crusts that collect about one of my blackheads are germs, too. They dig in my skin and bring all that out!

"Doc's nutty on germs. He thinks every time I shake myself that stuff that collects along my sleeves is germ debris. Probably the *Germ Gazette* would say there was a storm! Once, quite a while ago, Doc let me look at one of my pimples through his microscope. How funny! There was a place full of little germs, and all about it another

lot were trying to get in. Turkey, I believe they called it. Those inside tried to keep the others out. Little shoots of red showed where something was thrown from one at the other and then some germs would be literally blown to pieces. At last the outsiders got in and killed the others. Then a touch of erysipelas set in and destroyed the pimple.

"I have watched the little things for hours through the glass. At first they seem to just wiggle about, but if you watch closely you will find they really seem to be animated by a purpose.

"Do such atoms think? Are they really conscious beings?"

Glorious your aim—to ease the laboring heart,
To war with Death, and stop his flying dart;
To trace the source whence the fierce contest grew,
And life's short lease on easier terms renew;
To calm the frenzy of the burning brain,
And heal the tortures of imploring pain;
Or, when more powerful ills all efforts brave,
To ease the victim no device can save,
And smooth the stormy passage to the grave.
—George Crabbe.

STICK TO THE FEE-BILLS

The Greene County Medical Society has issued a fee-bill in pamphlet form. Each member, says *The Leader*, has been furnished a copy, "and will govern himself accordingly."

Will he! We fear *The Leader* is unduly optimistic. Fee-bills many have we known, duly and unanimously adopted by the membership; but one that the members respected have we not known.

The doctor, after all, is a man. He is governed by the same rules, needs, impulses, motives, weaknesses as other men. When the august assemblage of working-men resolved that the day should be divided into eight hours for labor, eight for sleep, and eight for their amusement, they came very near the position actually assumed by the men who vote for fee-bills.

Stick to a fee-bill? Huh! A fee-bill is a good club to sway over the head of the man who knows no better; but let any good patient kick, and his kick goes.

"Twenty-five dollars for a confinement? Doctor Smith will attend for fifteen."

"Well, I'll do it for ten, then."

And there goes your fee-bill.

How we'd like to say: "Smith asks fifteen? Well, my charge is thirty." But we never do it—at least not more than once. The plain truth is, that we go for what we can get; and whenever we really try to uphold the fee-bill there are always so many to cut under that we run, too.

The whole miserable fee business is a relic of antiquity, and so long as we look on it with superstitious awe, as our fathers did look at the lightning, and as theirs looked at epidemics, so long we stay in the slough.

Here is something different—*The Dallas News* tells us that the physicians of that enterprising Texas city are considering a rearrangement along the lines advocated first in the columns of this journal—the prevention of disease. Dr. Bernard is thus quoted: "Many physicians have come to the conclusion that the profession can do more good for the human race by teaching it how to keep well, instead of getting it well after it has become afflicted. We have gathered data which shows the system can be put in effect upon a scale of prices ranging from 40 cents to $1.00 per month for each patient . . . . . The physician is interested in keeping the patient well, for his fee is not increased by a difficult operation. . . . . By preventive methods, the United States reduced the mortality at Panama from 41 to 9 per 1000. Germany, where they have in vogue such a system, has extended the average human life 27 years."

Well, how long is it going to take for you to see the truth of this matter?

PHYSIOLOGIC BALANCE

Anybody can give a dose of medicine. Nothing is easier than to buy and take a dose of castor oil; there is a free evacuation of the bowels, an artificial diarrhea, the patient feels vastly relieved, and jubilates that he has saved the expense of consulting a doctor. Very simple.

But the overstimulation is followed by relaxation, the bowel is more sluggish than before, and unconsciously the "attention" the patient is giving his digestion results in the formation of the cathartic habit, and his bowel loses the power of physiologic function.

The non-drug fanatic says, "Do not use drugs, but rely upon nature's remedies—fruit, bran, and similar dietary irritants, to keep the bowel clear." But, an irritant is an irritant, and there is no reason whatever for believing that the food laxatives act any less injuriously as habit-formers and bowel-weakeners than do the drugs. I never could comprehend the reasoning (?) that assumed the foods and other non-drugs to be any more "nature's remedies" than the medicinal prin-

ciples. Who made the latter, if not the Universal Creator?

Bran, molasses, prunes, massage of the abdomen, all these and every other remedy that afford an artificial or extra stimulus to the bowels will in time become habitual and without them the organ loses its power of function. Massage becomes an onerous task; the dietary laxatives get to be nauseating by repetition; the daily colonic flushing is an unmitigated nuisance in time.

Do the bowels really need extra stimulation? The Perfectionist will deny this, claiming that the human body is made perfect to begin with and that all its weaknesses are the result of abuse or neglect. Metchnikoff and many other practicians deny this perfection and assert that a study of the fact shows the large bowel to be one of the imperfect parts of the mechanism, and that, as a rule, it needs aid in the performance of its expulsive function. That such a need appears with advancing age and grows greater with years, nobody pretends to deny.

With younger individuals, it is an individual affair; with the evidence preponderating on Metchnikoff's side—there are few persons who do not feel decidedly relieved by a free catharsis. Relieved of what, if not of evils resulting from sluggish bowels?

Here is a little evidence: One man has taken a small dose of saline laxative, containing about 15 grains of magnesium sulphate, every morning for twenty years. In all that time the dose has never failed to liquefy the stools and promote an easy evacuation. The dose has never been increased from the first day.

Another has taken a few drops of cascara thrice daily for five years—a bedridden woman this—and never has it failed or has required an increased dose.

A third has taken for years, a very small dose of a combination, known rather widely as a laxative, reducing the dose to a small fragment of that at first found requisite, but never quite discontinuing it; what he now is taking daily possibly containing 1-100 grain of aloin. Fifteen years has this been continued—quite a habit.

In all these cases and many hundreds like them, there has been a drug-habit induced by a physiologic defect that necessitated it. No ill effect of any description has been detected in any case.

Could any better results have been obtained by paying a masseur for a daily rubbing, or by doing it oneself, or by spending five minutes rolling a cannon-ball over the abdomen, or by using an enema, or by eating foods regardless of their cloying the satiated stomach? Count the cost of time spent in taking a daily enema for twenty years; the cost of the apparatus used, the bother of getting water just right in temperature, the trouble of toting the stuff about, and compare.

There is just one easy lesson to be learned, in order to insure success in the application of drugs—realization of the meaning of dosage to effect. Learn to give exactly enough to correct the defect, and no more. The layman takes his cathartic, gets an artificial diarrhea, feels immensely relieved, and lets it go at that. Even with many physicians, it is not such a general thing for them so to gauge their doses as to get a physiologic, and not a pathologic, action. It takes practice and watchfulness, as well as the triple knowings of physiology, pathology, and therapeutics.

I know of no single aid in this study of therapeutic action equal to a combination devised by the writer some years ago as a "peristaltic persuader." It contains berberine, strychnine, capsicum, physostigmine, and a little extract from the butternut, which latter acts much as does rhubarb. No known preparation of aloes could be found the bulk of which was not too great for the granule form.

So perfectly is the combination in question adapted to its purpose that it seems impossible to overdose it. Take a granule three times a day, and one is simply conscious of regular bowel movements; sufficient, not diarrheic or griping. Take eight granules, and the effect is rather accentuated. Rarely does one need more than three a day after the first week. The effect is not manifest for two or three days after beginning their use. Unless one is really accustomed to study function and drug action, he may be tempted to undervalue the activity of the granules—but, if one has just enough action, what more does he want?

This combination is better fitted to the elderly than the young; it is well suited for those who can not take aloin because of the latter's awaking a sleeping tendency to hemorrhoids, or because it arouses undue uterine activity. It is a useful succedaneum to the aloetic laxatives, after under their use the peristalsis has grown stronger.

In aging men, when the lower bowel grows sluggish and the vesical detrusor weak, this combination gives tone and power to both weakening organs. But the object of this is rather to call attention to its value as aiding the study of drug action and the securing of

physiologic balance than its specific applicabilities to morbid conditions.

I say to the student, study anatomy and physiology on the living man. Observe him closely with your eyes, until you learn his various expressions. See him walk, sit, lie, work, eat, breathe, talk, etc. Feel of him, and see how he is made, and what he feels like in different parts. Learn every prominence of bone in the body, and its relations to articulations, blood-vessels, nerves, organs, etc. Hear every sound he makes, and learn to recognize its character. And, lastly, learn to recognize all of the many smells of which he is the base. Learn him from the crown of his head to the soles of his feet, and analyze him with your own senses, and you will have the foundation for a good physician.

—Dr. John M. Scudder.

DEATH—OR MERE LYING?

Sitting behind two men in a Pullman the other day, I was compelled to overhear a by no means confidential conversation. They were men passing sixty, one a banker, the other head of an important business; both men whose names would instantly be recognized by many a reader of the newspapers published in their home city.

They were not discussing Roosevelt or Woodrow Wilson, the new tariff or the Japanese, Mexican or Balkan imbroglios, nor matters of finance, business, politics, literature, art, the wave of crime or the grafting political healers. No, none of these fertile topics seemed to have attracted their interest. The effect of the drought on crop prospects and the far-reaching influence on transportation, credit, and the cost of living? The pay of employees and its relation to their morality, and of that to their efficiency? Science, anthropology, archeology, music, drama, tango, picture shows? None of these. What then? They were simply bragging of their sexual prowess, unusual for men of their age!

Had these men realized the true significance of their statements, if true, they would assuredly have exhibited caution about making them public. For nothing in our science is more certain that that unusual sexual vigor in a man of advanced years is pathologic.

Any marked aberration from the average is abnormal. Mediocrity is healthy, genius is disease. The well-balanced development of the faculties makes for health and longevity; the exaggeration of any one of them, with corresponding shrinking of the rest, offers little chance for long, healthy, and happy life.

"The world must have geniuses" said poor Jennie Welsh Carlyle, "but it's pretty hard on those who have to live with them."

In the retention of sexual potency as age comes on, men differ widely. Some enjoy a brief and stormy period of excess, and their sexual history closes early. Others observe with equanimity a gradual decline, which occasions few regrets, as their mental maturity brings a preference for more worthy pursuits. With many, there is an unwillingness to acknowledge the infirmity of age, and this may lead to the strangest manifestations of senile puerility. Such men dye their beard, wear wigs, employ the arts of the toilet, in the vain hope of concealing what is the more glaringly made evident thereby, the progress of years.

Men of this type may resort to the physician to arouse their failing powers, and insist upon the supply of aphrodisiacs, even though their own common sense must tell them that these stimulants are useless, that they cannot really add an atom to the store of sexual power, but merely hurry up the reserve forces and accelerate that complete exhaustion that is bound to come. Few of these listen to the wise counsels, few that seek to conserve and prolong their remaining forces by judicious management and moderation.

The man who really finds himself at sixty capable, and eager, to keep pace with a youth of twenty needs the attention of his friends, for he presents a recognized symptom of incipient brain softening. He is an unsafe business man if his abnormality is thus marked, and he needs a doctor. The sources of this undue sexual irritability should be sought and removed. No man of sixty has such a surplus of vitality that he can afford such a drain.

Do not flatter yourself that you are the exception—there are no exceptions, and abnormality is disease. You may sacrifice the best years of your life vainly trying to prove that you are not as old as you are. Does not the fact that a man should attempt this bespeak the beginnings of imbecility?

Why should any man be ashamed of his years? Why not say frankly: "I have completed my three-score years and feel every day of them. I cannot work as hard as I did a year ago, I see that I must be less active with each passing year. I must keep up and retain the ability to counsel the younger men, adding my experience to their vigor. But I must leave the doing of things to the young."

Is the lesson a bitter one? Why should it be? By this time you have learned many things; among them, to expect less of your-

self. Looking back over the sixty years of your life, you can easily see what a fool you have been, and you may wonder how you have acquitted yourself as well as you have. You see where you could have done better; but, then, our hindsight is always better than our foresight. You learn to admit that you have had all the good that was coming to you; that you have made of yourself more than your stock of gray matter entitled you to; and, on the whole, you "have no kick coming."

But of all the fools on this demented earth, the biggest fool is an old man posing as a young rake and imagining he is deceiving everybody. Why, the house dog and family cat know his mustache is dyed, his hair is a wig, his color is paint, his wrinkles are plastered out with cosmetic, his boasts of virility are lies.

Say not the struggle nought availeth,
The labor and the wounds are vain,
The enemy faints not, nor faileth,
And as things have been they remain.

If hopes were dupes, fears may be liars;
It may be, in yon smoke concealed,
Your comrades chase e'en now the fliers
And but for you possess the field.

—Arthur H. Clough.

TOO MUCH JOHNSON?

Many years ago Malthus called attention to the rapid increase in the population of the world, an increase far more rapid than that of the food supply; and he advised that pains be taken to limit the rise of the human flood, lest we reach the point where the world can no longer produce food to support its population.

Now the question has again been raised—this time as an objection to the system of precise, scientific therapeutics advocated by this journal, since, by breaking up disease attacks in their incipiency by the direct and powerful intervention made possible by the alkaloids and other modern remedies, lives are saved and the constitution of patients is not impaired by prolonged suffering. Hence comes a distinct prolongation of the average term of human life. Add to this the improvement secured by the spread of a knowledge of sanitation, the regulation of many matters by governmental authority, the growing favor shown to the proposed system of prevention as substituted for the worn-out fee-per-visit absurdity, and there is good reason for the expectation that this growth of longevity will vastly increase the earth's burdens.

To say that we need not cross the bridge until we come to it, is a witty way of dodging the difficulty. Man is a reasoning being, if not a reasonable one; and the fact that the doctrine of Malthus has been adopted in most objectionable ways, with disastrous effects, shows that free discussion is advisable.

How near are we to the world's limit of possible food production? In conquering the West, we did not proceed by the slow accretion of new land at the edges of cultivation, but by leaps and bounds went through the wide spaces, settling here and there where an attractive bit took our fancy. We reached the Pacific, and were thrown back by its waves. Vast tracts still await examination.

Go through any of the older states, and you find vacant lands that could at least pasture sheep. Even into New England is filtering a new population that finds soils it seizes greedily. Go through the lower peninsula of Michigan to Mackinac and note the many miles of cut-over timber-lands that might easily be transformed into productive homesteads.

We may safely say that with present methods of cultivation there are vacant lands in the United States capable of supporting three times the present population. Take Louisiana, with 28,000,000 acres, of which about 4,000,000 are under cultivation, much of the rest the richest bottom land on the face of the globe, needing only drainage to make it rival ancient Mesopotamia with its yield of a hundredfold. Draining swamps and watering arid tracts may easily add an empire to our food-producing areas.

Attention is but just being directed to improved methods of farming. That our average yield of wheat is about fifteen bushels to the acre can only be excused by the prodigal plenty of our lands—it has been easier to take up new acreage than to give attention to increasing fertility of the old. We know that the yield of corn may be raised to over 100 bushels; that potatoes may yield 400 or 600 bushels; that every acre of farm-land in the country may be made to double or quadruple its yield by easy, well-known methods.

The productive capacity of the tropics has never been estimated. The now unoccupied valley of the Amazon could easily support twice the present population of the globe. This immense alluvial area is bursting with riches; its soil, climate, natural productions form the greatest asset of the world today—and this vast region is peopled by just a few thousand wandering Indians, with a fringe of little settlements along the rivers where the

wildlings are brought to market. On a quarter acre 175 valuable woods for the cabinet-maker were counted. Today this section exports a little timber, a few nuts, and some rubber from the forests.

The two greatest mechanical forces in existence have never received enough attention from our Edisons—the heat of the sun's rays and the rise and fall of the tides. Beside these sources of power Niagara is dwarfed into insignificance. By the time our coal-beds and oil-streams are exhausted, we shall have learned to utilize these exhaustless sources of energy.

Altogether, it seems as if we could welcome a few more babies without worrying about their bottles.

The whole world now insists upon exactness—the day of glittering generalities is gone forever. Why does the doctor not demand exactness also—drugs without dirt; definite principles instead of the crude plant; alkaloids, glucosides, resins, chemicals—medicinal forms that act in the same way always?

CLINICAL USES OF HYDRASTININE

Golden-seal is a great favorite with the physicians of Germany, more particularly in gynecologic practice, but, when prescribed in the form of the fluid extract, the women patients "hate" it for its "horrid" taste, and so it is that hydrastinine—now made more available since being produced synthetically—is hailed as a deliverance from evil; this the more so, in that it can be administered hypodermatically.

As long ago as 1892 Dr. H. Walther began to experiment, in the clinics at Giessen, with hydrastinine as a substitute; but at that time the price was prohibitive. Now, however, he has taken up the problem again and, after a year's extensive trial, has reported his results, together with those of other investigators, in the April 1 issue of the *Muenchener Medizinische Wochenschrift.*

Doctor Walther affirms that in its action upon the uterine musculature as a hemostatic hydrastinine exactly parallels that of the fluid extract, minus the objection of bad taste, uncertain composition, and the presence of the cardiotoxic hydrastine; in addition to supplying a hypodermic agent. He predicts the early displacement of the extract.

One thing, however, he points out—the cases must be properly selected (wherein many physicians go wrong); and when the drug seems to have failed it is because of surgical reasons, such as the presence of neoplasms or easily bleeding erosions, where the best of hemostatics cannot avail.

Hydrastinine should be used when a direct contractive action upon the arteries of the walls of the womb is required, and when there are no gross lesions and no newgrowths; in such cases failures may be looked for uniformly. It is especially valuable in the menorrhagias, the remedy being taken prophylactically before the menstrual period, twice daily, in small dosage, up to the period; and in larger amount three times daily during menstruation. The period of bleeding is shortened, while tendency to clot formation is overcome.

Hydrastinine also has been found particularly adapted to the treatment of the excessive monthly flow of girls entering upon their menstrual life, although here stypticin gives good results. Still, the latter being an opium alkaloid, it is not free from objections, especially at that age. However, in girls of from 13 to 16 years the menses became more regular.

Further, hydrastinine proved serviceable in correcting the too profuse menstruation consequent upon endometritis, uterine displacement, myomatosis, and the like. Here the drug was given in ascending doses, from week to week, up to the appearance of the catamenia. While the final dosage was quite large, no bad symptoms were felt by the young women, except in the case of just one nervous individual, who complained of a peculiar sensation about her heart.

One particular field of usefulness for hydrastinine appears to be where there obtains a tendency to bleeding in diseased adnexa. And in this connection the author points out once more how very carefully the practician must guard against indiscriminate curetment when the adnexa are involved—be the trouble an undiagnosticated pyosalpinx, an unrecognized tubal pregnancy or a resulting tubal blood-mole, tubal abortion, et cetera.

It is exactly in the bleedings of the foregoing nature (where ergotin is out of question, while the stypticin of opium might possibly be considered) that hydrastinine becomes helpful because of its contractile action upon the arteries rather than the muscles; at least temporarily, until the true nature of the trouble can be ascertained. So, also, Duehrssen found this alkaloid beneficial, as a palliative, in chronic conditions of the adnexa.

Dysmenorrhea and menorrhagia have both yielded to this remedy in the majority of instances, although Walther suggests that the association of an opiate might prove helpful.

A particular indication for hydrastinine, we are told, is after minor gynecologic operative procedures, including, for instance, excisions, polyp removal, abrasions, fixation, correction of displacements, and other intervention of this kind.

Preeminently, however, should this drug be freely prescribed after uterine curetment for the purpose of curing recurrent hemorrhages; this the more so, since it not infrequently happens that—to the patient's chagrin, when she expected the reverse—at the first few subsequent menstrual periods the flow will be, perhaps, extremely profuse. Here hydrastinine acts beautifully as a prophylactic if taken, in goodly dosage, during four, five, or so, days, and also for several days preceding the expected date. If, for some reason, an action upon the uterine musculature is desired, the drug may be alternated with a good preparation of ergotin.

Of unusual interest is Dr. Walther's success obtained from the subcutaneous employment of hydrastinine, especially after operations of the character enumerated. It was thus used in some 30 cases. Still more convincing were his hemorrhagic cases—for instance, old hematocele, and chronic endometritis and myometritis in which operation was not resorted to, and in which results from hypodermic injections were prompt; the usual dose being 0.0175 Gram (2.7 grains). No local irritation ever was observed. Giving it by the mouth, Walther's dosage ranged from 3-4 grain to 3 grains, sometimes reaching 4 grains, repeated twice a day. Ordinarily we have given it in much smaller dosage, finding, here in America, that 1-6 to 1-4 grain repeated at half-hour to one-hour intervals will usually elicit the desired action.

In hydrastinine the gynecologist now seems to have at command another hypodermic agent to place alongside of ergot, from which quick results may be expected in genital hemorrhage. Furthermore, Doctor Walther is hopeful that this agent yet will be proven useful in general practice, as, for example, in diseases of the lung, the kidneys, and others.

In this connection, though, it should be stated that Walther thus far has not dared to give hydrastinine to pregnant women, because a certain degree of contractile influence upon the uterine wall-muscles cannot be denied.

To sum up the field of usefulness of hydrastinine, the following synoptical presentation may serve as a guide; viz.: menorrhagias, especially those depending upon functional disturbances of the ovaries and chronic adnexal derangements, without serious anatomical alteration of the uterine mucosa (dysmenorrhea, complicated with menorrhagia); displacement of the womb and of the vagina; secondary bleeding in organic disease (heart, liver, lung, e. g. emphysema); chronic endometritis in which there is a tendency to menorrhagia; even in atypical hemorrhage, in so far as not determined by any suspicious anatomical changes; in myomatosis of the uterus, especially of the subserous and intramural description.

To these tried-out conditions, there may be added, inferentially, hemoptysis, epistaxis, renal and intestinal bleeding.

The author closes with an unreserved recommendation of this remedy, calling it an important addition to our remedial treasure.

A lot of us save for somebody else's rainy days.
—David Gibson.

DIETETIC VAGARIES A LA METCHNIKOFF

Even great men, it appears, have their weaknesses and whims and oddities, their absurdities even, especially those whose greatness lies mainly in one direction; and these foibles are usually an excrescence upon their particular form of greatness. Great scientists are not more exempt than other men. Thus, we find the great Metchnikoff gravely giving currency to the following hyperscrupulous directions for evading the lively and ubiquitous cancer germ—a microbe which, by the way, has not yet been shown to exist:

"Never eat uncooked fruit. Take bananas, for instance. People think that because they have a thick skin [the bananas or the people?] they are protected from microbes. Nothing of the sort. I plunge them into boiling water [again, the bananas or the people?] before eating. I always pass my knives and forks and spoons through a Bunsen burner before using. All dishes are cooked. [Roast tureen must be a toothsome morsel!] Water is filtered and then boiled. I never eat uncooked fruit. Strawberries ought to be plunged into boiling water a few minutes before consuming. It sounds troublesome, doesn't it? But it helps to avoid the cancer germ."

Sounds troublesome? We are afraid it would take a "shorter and uglier" word to express our opinion of it. Metchnikoff seems to be passionately obsessed by the thought of boiling water as Gilbert's Mikado was for

that of boiling oil. We are wondering how he surmounts the difficulty presented by his own body as a possible source of infection. Does he plunge that in boiling water, too? Or, perhaps, he passes his fingers through a Bunsen burner? It would be interesting to get a view of Metchnikoff's dining-room—or does he eat in his laboratory? A Bunsen burner and a sterilizing outfit must make an artistic and appetizing decoration for a buffet.

Oh, well, we should worry! If Metchnikoff gets any satisfaction out of that sort of thing, he is welcome to it, and his personal habits need not disturb us. Like the old Scotchman who declined to pay the doctor for his prescription, we don't have to take his advice. We shall continue to munch our bananas unscalded, use our dishes uncremated (they break enough of them in the kitchen, as it is), and eat with knives and forks that the hired girl has pretended to have washed (varying the game at times by eating with our fingers), and pick and chew apples straight from the orchard, whenever we are lucky enough to get the chance.

The serious side of the matter is, though, that this attitude of Metchnikoff represents just the type of morbid psychology in regard to health and disease and everyday living that is pervading the entire civilized world at the present time, and is creating a universal phobia against this, that and the other kind.

Every individual and every movement has the faults of its virtues. During the past twenty-five years medical science has been making wonderful advances in hygiene and prophylaxis, and antisepsis and asepsis, and all of those phases of applied medicine which go to the protection of life and health; and has come into wide and intimate touch with the daily life of the people. All of which is very well and good.

No doubt at all that conditions of living have been enormously improved. But there is no doubt, either, that there is a tendency to run the thing to absurd extremes; that is the inevitable running to seed of any good thing. Bless my soul, when you and I were youngsters, we ate green apples and red mulberries, and nobody knew anything about it (I rather suspect the youngsters do more of it nowadays than *we* know anything about), and we bumped and cut ourselves and never even thought to stop and go into the house; and even when we did go in with a rather unusually bad gash, the most we got was a piece of salt pork bound on the wound. But now the least scratch calls for a solemn consultation and a rite-like application of bichloride or peroxide, and an anxious taking of temperature for the next week, in anticipation of septicemia.

Now, all of that, so far as it goes, is most commendable. It is a great deal better that a bruise or a cut, no matter how slight, should be cleaned and disinfected than that it should be left to fester and give trouble; and corrosive sublimate is a much more desirable application than salt pork.

So far, therefore, as modern science instils into the public mind ordinary prophylactic care and teaches modern prophylactic methods, it is admirable. But, unfortunately, that is not the extent of the present-day tendency. By such extreme teachings as that which we have quoted from Metchnikoff modern medicine is overshooting the mark and creating in the public mind a morbid, nagging fear of everything and everybody, the apprehensive idea that wherever one turns and whatever one is doing there lurks the specter of disease and possible death.

Happily, the public mind, in the last analysis, is pretty sane and sensible; and we do not anticipate its being very seriously unbalanced by these extravagant views. By the same token, the great rank and file of the medical profession are similarly normal and rational and will not give currency to such extreme fads. But the condition, nevertheless, for the present is a real one—a sort of prophylactic hysteria—and calls for determined counteraction, and even for the wholesome corrective of ridicule, if necessary.

FOOD THERAPY

In this day of running after everything that can be brought under the designation of "nature therapy," how is it that nobody seems to think of the therapeutic possibilities revealed by a study of the chemistry of the commoner foods? What a chance for the quack seeking some new method of devouring the substance of credulous dupes. There's quite enough in the thing to hang thereon a new fad. For instance—

When there is, in any person, evidence of a deficiency in the stock of lime, why resort to the inert, dead, unassimilable product of the kiln, when in the asparagus we may secure a supply of vitalized, actually living calcic combinations? Are we faced by a case of giant urticaria, or of hemorrhagic tendencies, of chilblains, of that tissue fragility we associate with the children of the tuberculosis—instead of prescribing the dull, gross, lifeless products

of the laboratory, we order a diet of the succulent shoots that, properly adjuvanted with salt, corrigented with pepper, and excipiented —no, not men—with butter, and so gratefully titillate the palate, perfume the excretions, and dissipate the ailment?

Why do we not avail ourselves of the rich content of remedial salines in the bean or of the magnesia in Brussels sprouts? Must we pay extortionate prices for the iodine of sea-water, when in the delicious pineapple we obtain this halogen in far more agreeable form? Why not prescribe one banana t. i. d., cum saccharo q. s. et spiritu sacchari jamaicaensis, glaciati fortiter? Try it on the rascal who blows in with evidences of a swift youth, not wholly scatheless in the campaigns of the Cyprian goddess. And, if his blood has lost its crasis and the red corpuscles have become enfeebled, before administering such antiquated dope as Blaud's or Basham's, just add spinach to your prescription, and get real live iron.

Take any recent work on surgery, practice or therapeutics and turn to the suggestions on the treatment of ascites—will you find reference in either to the surprising efficacy of the onion? Yet, break the record and open some old volumes of Transactions, and read of the many, many patients presented to the learned medical societies as cases cured of ascites—yes, cured *tuto, cito et jucunde*—by the sole use of this grief-compelling fruit—or bulb. Read of how magically the liquid disappeared and the patient, despite his cirrhotic liver, resumed the life of the well. Really, the statistics given are better than those now claimed for serotherapy. All that was required was onions—onion soup, onion fried, onion stewed, onion broiled, onion fritters, onions for dessert. Yes, it was also suggested that the patient should like onions—and be single.

To this list, a French observer has made an important addition, in urging the black radish for biliary lithiasis. Precedence is allowed to the carrot here, but recent observers give preference to the radish. The juice is expressed and administered in doses of 100 to 400 Cc., daily for two to three weeks; then gradually lessen the dose. Under this treatment the colics cease; and, whether the calculi vanish or not, the patient seems well satisfied. I myself have heard of several Chicago cures!

To this might be added that in cinnamon we have an effective remedy against menorrhagia and metrorrhagia; in its closely allied oil of cassia an effective germicide; in summer-savory one of the most powerful and safe of emmenagogs; in nutmeg an anodyne and hypnotic of no mean power—not to mention aging lettuce; in capsicum one of the most effective remedies for shock, chill, vasomotor cutaneous spasm, and a host of affections; in black pepper an efficient discourager of alcohol craving; and in the common resources of the kitchen an arsenal of remedies the value of which would astonish those who never gave them thought.

The doctor's failure to collect a reasonable bill for service rendered is generally due to the doctor himself. Does he put a proper estimate upon the value of his work? Does his patient understand it? Supposing when he were called to pull a little boy out of the clutches of diphtheria he should say to the father: "I'll fight hard for the little chap. I've saved many a life when the chances were all against us. Surely the Great Judge will favor our side in this case. Yes, I'll work my head off to bring the little fellow around—but we'll need money of course. My retainer is $100, if you please." Would the father hesitate for one moment—or would he hunt up a cheaper doctor? Not on your life!

MANAGEMENT OF PUERPERAL ECLAMPSIA

Paul Zweifel, an obstetrician of wide experience, after practicing the various methods of combating puerperal eclampsia, is inclined, with reservation, to favor a return to the former method of bloodletting, as against forced delivery of the fetus; indeed, the satisfactory results in 84 cases have determined him to give it a thorough trial in a very much larger number. His report was published in the *Monatschrift fuer Geburtshilfe*, 1913, No. 37.

In a brief historical survey, Dr. Zweifel points out how formerly the treatment was purely symptomatic, and consisted mainly in abstracting blood and applying cold to the head; while in anemic women narcotics (opiates and chloroform) were resorted to. Later, Schroeder recommended the substitution of diaphoresis for the venesection, but continuing the narcotics. The Duerens introduced the method of operative interference by immediate emptying of the gravid womb at the first seizure, or at least upon the accoucheur's arrival. While this is the most generally accepted idea at present, Dr. Zweifel, on the ground of his experience extending over some twenty-five years, now takes a stand against the same, as well as doubting the hypothesis that the eclampsia results from toxins originating either in the fetus or the placenta.

The author then adduces statistics, in disapproval of those presented by Liepmann and Freund, of the Clinic of Bumm and Franz, who advocate instant induced abortion. Thus, he finds, that during the period of 1892 to 1895 the mortality among 80 eclamptic women, after induced abortion, was 15 percent; from 1895 to 1901 the mortality among 143 patients, under similar conditions, was 17.2 percent; while for 400 women thus treated in the years 1901 to 1910 the death rate was 18.5 percent.

Then it became known that the blood of eclamptic pregnant women is relatively thick because of a diminished water-content, and this induced Dr. Zweifel, starting with the year 1911, to begin using bloodletting again, but in conjunction with Stroganoff's treatment; the amount of blood withdrawn mostly being about 500 Cc., or 15 to 16 fluidounces. It is pointed out, when employing this method, that instillation of medicaments into the mouth must be desisted from for fear of aspiration-pneumonia; under certain circumstances, also, the stomach-pump must be employed. Venesection may have to be repeated.

As a result of his new procedure, only 5 deaths occurred among the 84 eclamptic women thus treated, this representing the extraordinarily low figure of 5.9 percent. Of the deaths, only 2 were the direct result of the condition, 2 dying from aspiration-pneumonia, and 1 from septic peritonitis. Moreover, the cases ending fatally fell within the first 20, the 64 patients last treated all recovering without a break. There also was a slight favorable difference in the death rate of the infants, comparing as 34.5 percent among the 84 deliveries against 39 percent under the former methods.

The Stroganoff treatment is defined in Stedman's Medical Dictionary as "The treatment of puerperal exlampsia by narcotics, shielding the patient from all external sources of irritation; and rapid delivery."

The technic was given in the Association *Journal*, some years ago, as follows: "In moderately severe cases first morphine, about 0.015 Gm. (1-4 grain); in one hour or sooner 2 Gm. (30 grains) chloral; morphine again the third hour; chloral the seventh, and 1.5 Gm. (45 grains) chloral again the thirteenth and twenty-first hour. Delivery is hastened as necessary and fluids are supplied by the rectum or mouth, from 150 to 250 Cc. four or five times a day. The aim is to prevent the convulsions, even if as much as 4 or 5 Gm. of chloral and 0.03 or 0.04 morphine plus chloroform occasionally are required in the course of five or six hours. If the convulsions keep up obstinately, delivery is hastened."

This is slugging the patient into unconsciousness with a vengeance! How much better to administer veratrine hydrochloride (preferably hypodermatically) repeating half-hourly to full physiologic effect, shown by slowing of the pulse, with nausea or vomiting as a sign of drug sufficiency. Complete control of the convulsions may be secured with hyoscine, morphine and cactoid. Eliminate thoroughly—bowels, bladder and skin.

Poverty and ignorance are the chief destroyers of child life and child health, and from these two sources flow, in swelling streams, the injurious conditions which sweep the young to destruction.—Adolf Baginsky.

PILOCARPINE IN SCIATICA

Chilling of the skin, says G. Alexander Young (*Interstate Med. Jour.*, June, 1913, p. 526), is one of the most frequent and important causes of sciatica. Accordingly, treatment should primarily be diaphoretic, sweating being secured by means of hot drinks and small repeated doses of tincture of aconite [better, aconitine], with complete rest in bed. Aspirin or full doses of the salicylates may also be given; while the bowels must be thoroughly flushed with saline laxatives. Hot applications, frequently changed, afford temporary relief.

After the first diaphoretic measures have been carried out, Young advocates the administration of pilocarpine nitrate, which he finds of great value in sciatica as also in the various forms of interstitial neuritis. The pilocarpine is given hypodermically in daily doses of 1-6 to 1-10 grain, according to the patient's reaction. It stimulates all the secretions and probably exerts a derivative influence upon the morbid processes of the nerves. The pilocarpine should be given daily for ten days or two weeks, to be discontinued then if no improvement has taken place, or to be continued if the patient is getting well. In one chronic case Doctor Young has used it for a whole month, with benefit.

In the more chronic cases, the remedy is given in the evening. The patient is allowed to sweat well between blankets, then rubbed down and placed in a warm bed for the night. Signs of pilocarpine overdosage are symptoms of vesical irritation and rectal tenesmus.

Leading Articles

Surgical Sex-Sterilization

Its Value as a Eugenic Measure

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EDITORIAL NOTE.—We are just beginning to realize that idiots, imbeciles, the insane, epileptics, alcoholics, many cripples, many who are diseased, and many who are sexually immoral or perverted owe their defects to no edict of the Almighty, and to no deliberate "sin" of the individual, but rather to the inheritance of physical or other weaknesses from which there is, for them, no escape. This truth brings responsibility—a responsibility which belongs to society as a whole. How shall it be met? Let Professor Jordan answer.

EUGENICS is the science of good birth. It deals with parents and offspring. Its chief immediate concern is, to discover the principles that govern human heredity and variation. It desires to influence human matings in the interests of future generations in accordance with well-established facts of inheritance. It aims to produce a better race through better breeding. It does not aspire to create; it seeks merely to prevent subtraction and contamination, and, by appropriate combinations of the best hereditary traits now in existence or in future to arise, to produce a race of human thoroughbreds, considered physically, mentally, and morally.

To this end, eugenics seeks "the civilizing of the "reproductive instinct," which, in the words of Dr. Adolphe Pinard, of Paris, "alone has remained in a barbarous state among all the socalled civilized nations, from earliest times." Eugenics is applied evolution in the interests of humankind.

Ideal Love the First Element of Eugenic Mating

The word "eugenics" was first employed by Sir Francis Galton, the founder of the science, in his book, "Inquiries Into the Human Faculty," which was published in 1883. Present activities indicate that Galton's hope, "that the concept of eugenics may enter the national consciousness like a new religion," may soon be realized.

With reference to all matings made in the interests of eugenics, love of the purest and noblest quality is assumed. Matings not compelled by love are uneugenical, regardless of what the scientific prognosis may be. The success of eugenic efforts is largely conditioned by the environment. Heredity needs suitable environment for full expression. An environment void of parental love is inadequate for the full and proper unfolding of the innate mental and moral qualities of the child. A prime eugenic factor in marriage is love. The converse, however, is not necessarily true; not all "love-matches," so called, are eugenic; from the standpoint of racial interest many matings should be disallowed. Eugenics would have love intelligent.

The eugenics propaganda should attempt to disseminate the knowledge that will potently appeal to the altruistic instincts and thus move to voluntary celibacy or at least abstinence from parenthood on the part of those genetically seriously deficient. Ultimately, for the protection of society against distressing economic and moral burdens and racial decay, some external repressive methods must be instituted against those unwilling or incapable of response to internal appeals.

Separating the Fit From the Unfit

Viewed in the mass, mankind may be divided into two great classes; namely, the racially superior and the racially inferior; the fit and the unfit; or, the civically worthy

and the civically unworthy, as Dr. Saleeby, of London, prefers to designate the two divisions. Trouble arises, however, when an attempt is made to draw the line in the effort to "separate the sheep from the goats"; and it may as well be admitted at once that it is impossible to draw such a distinction sharply. Moreover, many of those fit intellectually and of high civic worth may be quite unfit physically; and conversely. Likewise with respect to the moral side of man.

Still, there is almost universal unanimity of opinion with respect to the grossly and obviously unfit. Few will seriously contend that the neurotically diseased, i. e., the feebleminded, imbeciles, idiots, insane, epileptics, as also confirmed criminals, inebriates, vagrants, and paupers are either racially fit or civically worthy. The scientific evidence leaves little further doubt regarding the inheritance of the characteristics of these and other defectives. Probably no all-round great man or woman has ever come from such stock. Their offspring is of practically the same type and can do naught to abet—although much to hinder—human progress.

Thus, then, the line can be drawn sharply, and with perfect agreement and safety, between the grossly unfit and the remaining body of mankind.

Our knowledge probably is not as yet full and definite enough to warrant considerable procreative restraint or even discouragement of certain physically and morally inherently inferior types among this larger mass. Possibly the congenitally deformed, the tuberculous, cancerous, nephritic, and syphilitic should be discouraged from reproducing their type. At any rate, it may with much reason be confidently assumed that, if individuals of these types could be made to remain childless from reasons of internal moral and intellectual restraint, nothing would be vitally and irretrievably lost to the race. Indeed, the scientific harvest of the coming decade may clearly indicate the unfitness for parenthood of some or all of this latter, pathologic, group.

The unfit portion of our population, which at present does not constitute more than ten percent at the most, might perhaps be disregarded with impunity by the remaining ninety percent, were it not that its fecundity is greater than that of the average of the latter, and desirable, portion. But the reproductive proportion, between the two portions is easily as one to two. The unrestrained productivity of the defective and delinquent classes is appalling; abnormally large families among them are the rule.

The economic burden of these dependent classes may well become unbearable. Already it is exerting a measurable effect upon the supporting classes, in terms of retardation to potentially esaily possible intellectual attainments. Furthermore, the social contamination from this source is a very real menace.

Intelligent Voluntary and Legal Control of Procreation

In human matings, intelligent love should be the motive. In stock-breeding, the breeder's notions of what constitute points of value determine what matings shall be made. The two processes thus far have nothing in common. But, if a breeder of fancy Jersey cattle, for example, discovered among his herd a defective or deformed animal, he would not hesitate one moment to prevent matings with such an individual. The purity and strength of the herd demands the reproductive elimination of such undesirable material. The breeder would think of it in no other sense than one of danger of contamination.

Under analogous human conditions, the individuals involved should find a deterrent to bring forth progeny in an internal appeal based upon a knowledge of scientific facts. Only when such appeal fails, as in the racially far more serious cases of mental deficiency, do the two conditions assume similar aspects. Under such circumstances, certainly, in the extreme cases enumerated, some outside legal restriction should be possible of enforcement for the protection of the race against contamination from weakness and disease. Our knowledge now is sufficiently complete to warrant discouragement of mating between individuals characterized by the same serious pathological condition or defect.

Sterilization and Isolation the Two Available Means

It being granted, then, that certain seriously defective types should not be allowed procreative liberty, and, it being further granted that in these cases appeal can not effectively be made upon any moral or civic basis, what is the rational, legitimate, and humane restrictive procedure?

There are two answers to this question: (1) effective isolation during the procreative life of the genetically tainted individual;

(2) sterilization. If possible of attainment the method first named is almost incomparably the preferable one. The latter end, sterilization, may be accomplished by either one of two methods: (1) by castration or (2) by vasectomy and salpingectomy, respectively. Furthermore, in specific instances, either the one or the other of the two methods may be thought more desirable or efficacious. For example, in the case of hereditarily epileptic or tuberculous males, vasectomy would answer all eugenic requirements; in the case of sexual perverts and rapists, castration alone would suffice; while, assuredly, the feebleminded, the idiotic, and other mentally deficient types, all confirmed and uncurable vicious criminals, and also syphilitics should be isolated under custodial care.

The desired results could be obtained in certain instances as well as the whole movement for greater racial efficiency and worth assisted by the enactment and strict enforcement of more rigid marriage laws. Moreover, as an additional safeguard, it would seem that in all institutional cases, both state and federal, of serious deficiency, the individuals might be legally compelled to submit to the operation of vasectomy.

A sterilization-law must, of course, provide for a thorough scientific and complete investigation calculated to determine the fact whether the exhibited defect is hereditary.

Taking it for granted that all future laws will make adequate provision for such determination (and that the individuals indicated for operation are eugenically unfit), in brief, granting that all scientific and rational requirements are fulfilled, what then are the moot objections to sterilization?

Personal Benefits From Vasectomy Doubtful

Preliminary to this further discussion, I wish to assert my skepticism regarding the reputed therapeutic effect of sterilization by vasectomy. Recently there was shown me a sexual pervert upon whom this operation had been performed. According to statements by the director and the doctor in charge, this male had gained in weight, had largely ceased from his foul practices, had become more cheerful and more tractable. I can only say that the patient still looked very abnormal when I saw him several months later.

There is no physiological basis for such physical, mental, and moral change consequent upon this simple operation. Probably no decided improvement really does take place; but if in fact it does, while the evidence is as yet far from definite and conclusive, the improvement may be owing either to mental suggestion or to some indirect effect of the operation upon the sex-glands. If the latter, then the operation is open to all the objections of castration—with the exception of being a very much less serious operation, entailing practically no risk or inconvenience. To be sure, this gain of being able to castrate indirectly (if indeed this is the case) by such a simple method is enormous.

Some of the Objections to Sterilization Considered

Castration, though, must always be viewed as a mixed achievement. If the eugenic gain is not at least equal to the personal and social loss consequent to the removal of a sex-gland with a concurrent internal secretory function powerfully influencing the nervous system, the operation generally is unjustifiable. But there are extreme instances where the operation clearly seems justifiable, whether it results in the destruction of the secretory as well as the reproductive function of the sex-gland or not; and further investigation will soon clear up those cases about which there is doubt. Moreover, we are possibly at a crisis, and even such theoretical objection cannot now be heeded. Such clear cases for the present are all those in which the subjects ought, under the circumstances, to be confined during the reproductive period but for whom there is no provision for detention.

An effective method of procedure further presupposes an adequate method of universal detection of the antieugenic members of society, and adequate laws to compel institutional confinement. Such is yet far from being the case. It should be very clear, however, that relatively little can be accomplished until such condition prevails.

For one thing, universal application of the Binet-Simon mental tests to all school entrants would be a substantial approach to an effective treatment of feeblemindedness.

Professor C. B. Davenport's recent studies of epilepsy in New Jersey seem to show that under present conditions the number of epileptics doubles every thirty years. Certain other classes of defectives probably would show no lessened rate of increase. It is altogether likely that the number afflicted with feeblemindedness or with syphilis, for instance, doubles in an equally short period of time.

Something radical, then, must be done; and it must be done quickly. Not rapidly

enough does it seem can provision be made adequately to isolate and care for all our defective classes, comprising probably ten percent of our population, of which only about one percent is now in institutions.

Hence, sterilization seems to be our only hope. Sterilization by vasectomy is a minor operation, practically painless, and entails no real inconvenience. Why, then, is this eugenically prophylactic measure not more extensively exercised?

About the Laws in this Country

Eight states now have sterilization-laws authorizing or requiring surgical sterilizing of certain classes of defectives and degenerates, namely: Indiana (1907), Connecticut, Washington, California (1909), Iowa, Nevada, New Jersey (1911), and New York (1912). The types of persons upon whom these operations may be performed as prescribed in the various statutes include as follows: confirmed criminals, in all; rapists, in five; idiots, imbeciles, and feebleminded, in six; insane, in four; epileptics, in two.

"In Iowa, habitual drunkards, drug-fiends, syphilitics, and certain prostitutes and procurers are included. In New Jersey and New York, the words 'and other defectives' are added. In Connecticut and California, the inmates of certain specified state institutions are those prescribed. In all the laws, the determination of the individual to be operated upon is committed to a commission or a board. In New York and New Jersey, provision is made for a review of the commissioners' decision by a county court or the Supreme Court, with appointment, by the court, of counsel to represent at a hearing the person affected. New York, New Jersey, Indiana, and California leave the character of the operation to be determined by the board, or commission. Both Connecticut and Iowa specify vasectomy; Washington and Nevada specifically prohibit castration.

"Except in California and Indiana, little or nothing has been done to carry out these laws—their constitutionality is in question. Also, attorneys-general for the several states do not seem anxious to defend suits and rather appear to encourage delay in putting the laws into operation; while in Indiana, where for seven or eight years vasectomy was practiced without law and exclusively at the request or with the consent of the person operated upon, and for two years thereafter under the law of 1907 compulsorily, there have been no operations since 1909, barring a very few, and these at the persons' own request.

"In New Jersey, a suit is now pending in the Supreme court relative to the state's right to sterilize certain types of defectives. The Supreme court of the state of Washington has recently decided, in a test case, that the law is constitutional. Here, however, and in Nevada, the operation is specifically prescribed as a penalty, in addition to prison sentences." (Van Wagenen.)

The Rights of Society

Sterilization has not been proved to have any real therapeutic value. As a punitive measure it probably can never be defended on grounds of constitutionality. The "Bill of Rights" would seem to be violated. But as a eugenic measure protecting against racial contamination and injury the question of constitutionality does not seem properly to arise. Surely, society has a right, even an obligation, to protect itself against harm.

Exactly as society has a right to protect itself by most rigid safeguards—little recognizing individual and personal comforts and wishes—against smallpox, cholera, and so on, so it would seem to have an equal right to protect itself by adequate methods against idiocy, syphilis, and pauperism. Man does not have an inalienable right to personal or reproductive freedom, if such freedom is a menace to society. Viewed as a means of racial conservation, there probably remains no question of constitutionality.

Furthermore, what logical position can those who argue for the unconstitutionality of surgical sterilization take with respect to sterilization through gonococcus infection? They must either stultify themselves, or account all forms of sterilizing criminal and subject to penal measures.

If a man sterilized against his will, as a eugenic measure in some institution, can properly have recourse to law for damages, what legal restitution will we consistently accord to a trusting wife rendered permanently sterile and robbed of the sacred right of motherhood through a gonococcus infection? The thousand or more defectives who have suffered surgical sterilization have had neither personal inconvenience, nor has the loss of their possible progeny been aught but racial gain. But how can we adequately estimate the sum of personal misery and racial loss of the many thousands of noble women permanently rendered infertile by a gonorrheal or syphilitic husband!

This simply suggests that we probably shall have to look to the women for help in these matters. The suffragist movement is

one of the greatest allies of the eugenics propaganda. Just as woman will seek legislation, once she gets the ballot—as has already been done in certain of the states where she is admitted to full suffrage—to protect herself and the race against wanton infection, by requiring medical certificates showing freedom from infectious disease as a prerequisite to the granting of marriage licenses, and by enacting legislation providing for the notification and detention during the infective stages of all syphilitic and gonorrheal patients, so she will originate and help enforce laws providing for surgical sterilization as a eugenic measure.

Of course it were greatly to be preferred if all action here outlined, as the result of proper legislation, could result spontaneously, unconsciously as an instinct, or from motives of internal appeal. But such millenial times are not yet—indeed, may never come unless rigid legal measures are quickly adopted. Meanwhile, our most important and insistent problem is to bring about a steady reduction of the great army of the unfit, who constitute a heavy economic and moral burden, and a racial menace. Sterilization is an effective, quick, humane, and legal eugenic procedure. It should not be regarded as a punitive or therapeutic measure; it is peculiarly a racial *health* measure, and as such should be a portion of the health-regulation code administered under the state police powers. The only fundamental question involved in its practice is the scientific one of determining what are racially inimical characters, which of these are hereditary and by what law, and who are the bearers of these undesirable qualities.

The Scope of Suggested Legislation

The Committee on Sterilization (Mr. Bleeker Van Wagenen, chairman) of the Eugenics Section of the American Breeders Association in its recent Preliminary Report suggests well-advised "experimental" state and federal sterilization laws. The former is recommended to apply to "inmates of all state and municipal hospitals for the insane; institutions for the feebleminded, epileptic and inebriate; reformatories, charitable and penal institutions:" the latter to "inmates of all federal hospitals, reformatories, and charitable and penal institutions; to defective immigrants and immigrants with defective heredity."

The interests of the persons in question would seem to be adequately guaranteed by the requirement that the operation be inadmissible except in cases of "every inmate or immigrant just prior to release provided it can be shown to the satisfaction of the court of justice by the board of eugenics—representing expert knowledge of psychiatry, psychology, social work and heredity—that the candidate for release is a person with a defective germ-plasm." ("Problems in Eugenics," p. 466.)

There is nothing more certain than this: that to be permanently rid of defectives we must somehow cut off the source of supply. And unless some eliminating mechanism be installed the Anglo-Saxon race surely is doomed to the fate of the Greeks and Romans. Detention under custodial care during the procreative period would be effective and the least objectionable method; but present provision for such care is lamentably inadequate. Moreover, if steps were immediately taken—a course not probable, nor perhaps economically possible—by the time present inadequacies were met, the supply of defectives would, under present conditions, have probably doubled. For example, for proper institutional care of the conservatively estimated 15,000 feebleminded children in the New York city public schools, thirty institutions or colonies of 500 individuals each (the number giving best results) would be demanded, whereas the city now has only one institution with about 2000 inmates (Goddard). Institutional care alone, then, seems no longer adequate to meet the demands of the situation. Only by the aid of extensive surgical intervention does any hope of success seem possible, and only through this means can our national salvation be assured.

Racially we seem to be at the point of a crisis. National crises render admissible and, indeed, demand, most stringent measures It is to be hoped that discussions as to the constitutionality of eugenic (not punitive) sterilization laws—less pertinent in the case of public health measures—will no longer delay the further enactment and strict enforcement, of the only apparent immediate means of racial conservation. Not that this is the sole means; present and prospective euthenic measures are still essential; but all measures at this juncture seem to be inadequate to the situation, unless aided by statutes authorizing sterilization of anti-eugenic defectives.

Eugenics: An Entirely Unscientific Consideration

By A. L. BENEDICT, A. M., M. D., Buffalo, New York
Editor of "The Buffalo Medical Journal"

EDITORIAL NOTE.—In connection with this article, be sure to read the contribution by Professor Jordan, of the University of Virginia, which precedes this paper. These two articles give an excellent idea of the present status of the new science of eugenics.

THIS article was suggested by an experience at a social function, when a lady plunged, from the formal introduction, into a discussion of abortions, premarital certification of freedom from syphilis, single standard of morality, and all that; also, by the somewhat old-fashioned squeamishness shown, the next day, by a much younger woman, in avoiding the very frank illustrations of luetic lesions, the natural method of nourishing infants, certain phases of the Mendelian law, and so on, placed on public view by various philanthropic institutions. Indeed, under present conditions, sex-problems are so frankly discussed in conversation, lectures, published articles, that they tend to distract the attention from matters in which one is supposed to be more especially interested. And this is the only apology that the writer has for entering into the discussion.

Consanguinity in the Light of History and Experience

The calm way in which the majority of those interested in sex-problems assume that the subject is a novel one is somewhat exasperating. The Bible, especially the Old Testament, is full of eugenics. The Jewish race owes its present vigor, its relative integrity of blood and commercial dominance, almost entirely to an adherence to eugenic ideals and to a system of dietetic, sexual and other hygiene that, if originally lacking in formal scientific explanation, has stood the test of practical experience to a degree almost if not quite unsurpassed.

A study of primitive races shows very different views of morality, of the relative merits of inbreeding and of seeking foreign strains, of social customs generally; but, in almost every instance the eugenic ideal is plain. If this ideal was not measurably fulfilled, the race gradually died out; and we note the survival and progress of various races under such different conceptions of eugenics that it is worth while to question whether widely different principles may not be equally appropriate to the building up of a sturdy race.

For example, in time and places indifferently widely separated or closely approaching each other, we observe the opposite ideals of in-breeding and of out-breeding. Marriage must not cross color lines, caste lines, political boundaries; it must be confined to the same little village or tribe consisting of families that had intermarried for generations; a man must raise issue to his dead brother; marriage of near-cousins is commonly practice; even what we consider actual incest is allowed or favored. Or, in other races opposite ways are insisted upon with equal strenuousness.

Naturally, all sorts of inconsistencies are encountered. For example, in our own country, a strain of Indian blood is boasted of, while the most remote crossing with an African is considered a disgrace and, until comparatively recently, has been a matter of social ostracism and political disfranchisement. The considerable strength developed by the "Know-nothing" party, less than a century ago, expressed an even stronger sentiment against marriage across race lines no broader than those scarcely effaced in the home country, England, at the time of the colonization of America. Orators, bidding for this or that foreign political support, grow eloquent over the blending of the various strains which have emigrated to the United States, the reason for their eloquence being that those strains have not blended to any appreciable degree, except that the pre-Revolutionary Americans have, in shrinking from foreign alliances, forgotten their own original racial differences.

Then, again, the intermarriage of cousins is denounced, as contrary to the principles of eugenics, by persons who, if they would take the pains to look up their own ancestry for five or six generations, would find that their own country was established by the offspring of second, first, and even "double"

cousins; who would find, indeed, that there were not ancestors enough in the colonies, before means of rapid transit were available, to furnish a race that was not pretty closely inbred.

Bearing in mind the same lack of transportation and the social and local barriers existing in Europe during the Middle Ages, we must even conclude that almost every little community was a sub-race resulting from inbreeding. The press reiterates the statement that the nobility, and especially the royalty of Europe, consists of perverts and inbeciles, owing to inbreeding of a few families; then, side by side with literature of this kind, is printed evidence of the strength of character and physical development of at least a large number of the members of the same families.

Furthermore, it has been taught that the miscegeneration of whites and negroes will result in race extinction within a few generations, while, on the other hand, it has been shown recently that this was by no means necessarily true and that the high death rate and lack of virility of such mixed breeds was the result almost entirely of social and sanitary factors, and dependent upon race mixture only in a recondite sense. Ancient history even shows that degrees of inbreeding now universally abhorrent to all civilized and most of the uncivilized peoples, consisting of actual incest, were not incompatible with strong mental and physical offspring.

Results of Breeding Among Animals and Plants Are Not a Guide

These facts, the merest skimming of ethnic evidence, warrant a considerable degree of agnosticism regarding certain tenets of present-day eugenic science. They call for a still more careful study of eugenic principles with regard to the opposite ideals of pure and mongrel breeding; and they can not be settled offhand by expressions of prejudice, nor by analogy from experiment with plants and lower animals.

Thus, certain physical characteristics highly prized in pure breeds of the lower animals are of the most absurd triviality—such, for instance, as color and texture of hair or feathers, facial conformation, length and droop of ears, and the like. Even such characteristics as speed or draft-power in horses, size of swine, fat content of milk in cows, development of varieties in wool, not to mention the modifications of vegetables to produce some special flavor or exaggerated size of the edible portion, in almost every instance are accompanied by sacrifices of reproductive power, resistance to infection, symmetric strength and conformation, and other vital qualities.

It is conceivable that in the remote future it may be possible, and desirable, to produce special strains of human beings for special purposes. At present, it scarcely can be desired that this should take place, even to the degree of existing tendencies to produce strong muscle in one family or mentality at the expense of physique in others.

In other words, the present ideal of eugenics is, to produce a healthy, intelligent, and even pleasing type of humanity but without marked specialization, and to ignore color of hair, eyes, texture of skin, tendency to deposition of fat, and so on, or even exceptional muscular development, however useful such specialized breeding may be in the lower animals.

It has been remarked that the conceptions of the desirability of inbreeding and of outbreeding seem to be indifferently supported by experience. It is not at all impossible, however, that, while there seems to be no reason for racially pure blood on the one hand or a definite attempt to secure a mongrel race on the other, closer study may show reasons why certain races should, by preference, be mated with certain others; and conversely.

However, a very important fallacy exists in regard to race, in the sense of a national subdivision of one of the great color-branches of humanity or a well-established primary subdivision of one of these branches as, for example, the Semitic. National political designations do not necessarily imply race. European royalty, for example, is much more a race, in the ethnic sense, than are the subjects of any one monarch.

The same tendencies to mixture of population by immigration which confront the United States are common to many other countries of recent rapid growth. They probably were continuously operative among the American Indians, because of conquest and adoption. England (not the British Empire) is only a few centuries ahead of the United States in the process of assimilation; and historic and archeologic study shows that similar processes have occurred very generally and to a much higher degree than is usually imagined. Indeed, the best examples of race, in a physical sense, are local communities in various countries, where the popula-

tion has remained stationary for many generations.

Uncertainty of Socalled Family Characteristics. The Mendelian Law

It may be worth our while to discuss the word family. If by it we mean a husband and wife and their children, ordinary experience shows that there is no certainty of a conformation to type, either physically or psychically, although the influence of habit and close association may be observed; on the other hand, actual marked similarity in various ways may be apparent.

It is possible that a careful study on a large scale might show an illustration of Mendel's law, explaining by the law of chance the beautiful support of extreme notions as to heredity in some cases and equally marked exceptions in others. Theoretically it is plain that no fixed heredity can have become established in passing from one generation to the next.

Using the term in the broader, genelogic, sense—unless we assign a dominance to the male element not compatible with the spirit of the times, and which appears to be a ridiculous interpretation of the custom of using the surname of the male parent—it is questionable whether the word "family" represents a scientific concept.

Ignoring step-relationships and the intermarriage of cousins of different degrees, and supposing that heredity is appreciable for only six generations, covering a space of about two hundred years, each individual represents not one but 64 "families," and, although these are the same for brothers and sisters, 25 percent of them are different for even first cousins, while for distant cousins there may be only one common strain in all of the 64. Thus, the usual eulogistic descriptions of family traits, with which most genealogies begin, are obviously mere aerothermia, equally applicable to several hundred allied families, or, rather, to the desirable members of them.

This skeptic statement by no means conflicts with the published statistics of the Jukes and the Edwards families. It may be remarked in passing that the Edwards record differs from that of quite a number of other "families" largely on account of the enterprise of the press-agent. Birds of a feather flock together, and it is quite natural that, mating with approximate equals, environment and social influences should determine a like career for the majority of the descendants of any particular propositus.

Thus far eugenics has been considered without reference to pathologic conditions that may be supposed to transmit taints to offspring. But there is one further point that might be suggested before passing to the consideration of disease.

Mendel's Law Does Not Answer All

While Mendel's law appears to be too well supported to be questioned, it does not cover the entire problem. For example, in the mating of essentially different colored races, whether in the half and half, or in any other fractional proportion arising, when, after one ancestor, the line is continued in one race alone, we do not see a proportionate distribution of unit characteristics, but an almost mathematic dilution in each of the offspring of a given generation, of what may be considered the foreign ancestral characteristics, further diluted in the next; and so on. However, when the mixture becomes very dilute, say, in the fourth or fifth generation, then, many claim, the Mendelian law becomes examplified by the occasional occurrence of a throwback among a family of brothers and sisters who, otherwise, do not show the ancestral characteristic.

Again, as in the eastern reservation Indians, who, after considerable dilution with white blood, have intermarried .mainly among themselves for several generations, the Indian characteristics seem to be recovering their original strength, although obviously without opportunity for actually increasing the proportion of Indian blood.

Further study certainly is required to elucidate the relation of uniform dilution of ancestral characteristics and the distribution of unit-characteristics by the law of chance in a certain proportion of offspring, and especially in regard to the point as to whether the former type of heredity is replaced by the latter after a certain degree of dilution is attained.

Making Good in Emergencies

Article II.—How Can I Increase My Income?

By GEORGE H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—The ability to "make good in a pinch" is so indispensable to success, that there must be a place for a number of papers on emergency-practice. Believing this, we have arranged for several articles of this nature, of which this one is the introduction. Following, Doctor Candler will discuss the medical emergencies and Dr. Ralph St. J. Perry will write about various surgical emergencies.

IT IS axiomatic that in a true emergency no two ordinary men will act the same way. The moment a man is trained (as for instance are firemen, the police, and so forth) to meet certain suddenly arising requirements in the most effective manner, emergency ceases to exist and for him the entire procedure becomes a matter of routine. A lifesaver at the beach is not disturbed when the cry "Man drowning" reaches his ears; he loses not an instant in rowing or swimming to the spot, and proceeds to save the grasping, kicking, fear-crazed individual in a perfectly matter-of-fact manner. If the drowning person clutches at him and refuses to follow instructions, the rescuer does not hesitate to "knock him senseless" before towing him to the shore and safety; thus rationally meeting a second emergency which, less effectually dealt with, might cost two lives.

The highly trained ambulance-surgeon is not rattled when some dark night he finds lying beside the track a human being so mangled as to be almost beyond recognition. The rays from the headlight of the switch-engine and the dim lanterns of the train-crew illuminate a ghastly crimson pool and a chalk-white face; but the radial artery still pulsates and every second the crimson pool grows larger. There is at the moment just one rational thing to do, and that is, stop further hemorrhage. Therefore quickly and deftly the tourniquet is applied, the crushed extremities are protected, and the exsanguinated victim of the steel horse is rushed to the ambulance.

Then a further emergency presents itself. The hemorrhage has been terrific and unless the heart is sustained and the veins are filled the man inevitably will die before he reaches the operating-table. Strychnine and digitalin or adrenalin are injected, several ounces of normal saline solution is thrown into the cellular tissue (intravenous injection is not possible in a swaying ambulance), and the upper part of the body depressed in order to diminish the flow of blood to the injured extremities.

It is true that even when the patient reaches the hospital he remains an "emergency case," but the crucial requirements were met on the cinders of the yard and in the flying ambulance. Now the surgeon doing the operation of election has but to use good surgical sense and avail himself to the full of the perfect life-saving equipment at his disposal. Naturally, after some experience, he, too, works unruffled and with precision. But let us confront him or his confrère of the ambulance with a drowning man, or the heroic lifesaver of the beach with a severe traumatic hemorrhage, and nine times out of ten we shall get a splendid illustration of how that particular emergency should *not* be met.

Great emergencies involving numbers of human lives and scenes of heart-rending anguish unfortunately are not infrequent, and now, as always, men suddenly hurled into such maelstroms will acquit themselves nobly or, palsied with horror and fear, become drivelling nonentities, exaggerating their own trivial injuries and demanding sympathy from anyone who will listen.

A Deed of Cool Heroism

The writer recalls a wreck on the Grand Trunk railroad in Canada, some years ago, in which an obscure country physician revealed the mettle he was made of. A rear-end collision occurred in the dead of night and the occupants of the last car—a combined baggage- and smoking-car—were all killed or injured. One man was able to drag himself to the side of the track and there, supported by a pile of ties, he squatted, giving first aid to half a dozen fellow passengers who yet had life left in them.

Twice after bending over the forms brought to him this man shook his head and the bearers turned away with their burden, but usually his hands worked surely and rapidly, and with the few instruments from his pocket-

case and strips of linen obtained from the wardrobes of uninjured individuals he dressed wounds and stopped hemorrhages which, less promptly and efficiently treated, would have proved fatal or crippling. Only when the last cut had received attention and the rescuers from the surrounding country were pouring in was it known that the doctor himself had sustained a compound fracture of the left leg.

Those who have received a similar injury alone can realize the amount of fortitude it required to minister to the needs of others—many of them less seriously hurt—while suffering himself the agonies which attend fracture of the long bones and laceration of the overlying tissues.

But time and time again it has been proven that in the ranks of the profession are many such men, and not a single day passes that some doctor somewhere does not display the rare courage and intelligence necessary to meet a dire emergency as it should be met—sometimes, indeed, at the cost of his own life.

Emergencies in Ordinary Practice

We hear of great deeds publicly performed, but only few know of the thousand life-or-death emergencies that confront physicians in ordinary practice every day. A deep artery is severed, a child falls into a tub of scalding water, someone is torn by a savage dog or swallows poison. There comes a hurry-call for the doctor and unprepared, as a rule, he has to meet the most trying conditions intelligently.

Having once contronted and controlled any particular danger, the doctor feels able to fight it again later with equanimity, but his very next call may be to a case of placenta praevia, with an almost moribund woman and no assistance; or to revive a young woman who, tired of trying to live decently upon six dollars a week, has "turned on the gas."

Hair bleaching as some of these experiences are, they do not try the conscientious doctor as do less spectacular emergencies. The necessity for deciding whether it is possible to deliver a living child through a contracted pelvis without unduly risking the life of the mother; the advisability of immediate tracheotomy in a severe case of croup; the differentiation between diphtheria and a severe catarrhal angina in a large family; these and a hundred other emergencies of practice arise to try the soul and make a "real doctor" of the general practician.

And, unfortunately, even modern medical training does not adequately prepare him to meet many of the most urgent situations. Only observation, incessant study, and an abundant use of good common sense will enable the average man to acquit himself creditably. He must never cease learning. Just a few days ago I overheard a conversation between two men at Ochsner's clinic.

"You're a student, are you not?" enquired one of the other.

"No," was the reply, "I'm a full-fledged M. D."

"So am I," said the interrogator, "but I'm studying all the time, and the more I learn, the greater my conviction of ignorance becomes."

It would not be difficult to tell which of these two "full-fledged physicians" would best meet an emergency.

Naturally, it would be impossible in an article of this character even to mention a type of the various procedures that may advantageously be followed in the commoner emergencies. The doctor desiring to do his full duty under any and all conditions, if necessary, even will go without a new suit in order to obtain books which will give him the necessary information. Moreover, he will not wait until the crucial moment to acquire the dexterity which, when required, can alone avert death.

It is a simple matter to learn the pelvic measurements and recognize the various presentations. Daily manipulation of the joints and observation of the course of great vessels in patients under examination will aid materially in doing the right thing when suddenly confronted with fracture, dislocation or traumatic hemorrhage. The commoner poisons and their antidotes may easily be memorized, and, if called to a case of even suspected poisoning, the physician should go prepared, not alone to evacuate the stomach, but to administer the indicated remedies.

Quiz Yourself During Leisure Hours

It is an excellent plan to quiz oneself during leisure hours: "What shall I do if confronted with a severe case of poisoning by such and such a drug."

"How shall I proceed in a case of impending suffocation from the lodgement of a foreign body in the trachea?"

"Am I really able to handle properly a brow or shoulder presentation, and have I a working-conception of pelvimetry?"

These and very many similar questions the average practician can ask himself with advantage—provided he be not content with any but a thoroughly satisfactory answer.

He must remember also that the procedure which sufficed yesterday is obsolete today and that lives "unavoidably lost" five years ago are saved as a matter of course in this year of grace. Moreover, the "real doctor" will not be satisfied merely to do what everyone else has done; he will ever be trying to excel his fellows and his own past performances. It is such men that will save lives tomorrow that are lost today. In order to make this contribution as generally helpful as possible, I have endeavored to classify the more exigent emergencies every practician is likely to encounter as follows: (1) Surgical emergencies, including those of anesthesia. (2) Obstetrical emergencies. (3) Therapeutic emergencies, including poisoning.

(*To be continued*)

The X-Ray Treatment of Skin Cancer

By EMIL H. GRUBBE, B. S., M. D., Chicago, Illinois

EDITORIAL NOTE. -Little has been written recently about the treatment of carcinoma with the x-ray, perhaps because radium, thorium, and other of the newly discovered radioactive metals have the center of the stage just now. But if you think the x-ray has gone out you are mistaken. Dr. Grubbe can convince you of the value of this modality.

IT IS now about seventeen years since a report about several well-authenticated cures of skin-cancer attracted widespread attention among the medical profession, and among the laity as well, not only because of the striking results obtained, but also because of the peculiar nature of the curative agent used. The remedy that cured these patients was a physical therapeutic agent—the x-ray.

This report was the beginning of a movement in therapeutics that has constantly grown, until today it is accepted by the whole world as one of the established facts of scientific medicine; namely, that the x-ray is the best single remedy for skin-cancer. No therapeutic fact stands out with greater prominence; none has more adherents nor more successful users. Hardly a page of what is probably the most interesting part of medical history can be turned which does not recount some of the good qualities of the x-ray in therapeutics.

At one of the earliest meetings of the American Roentgen-Ray Society, I read a paper detailing my experience with the x-ray treatment of epithelioma. In the years that have passed and during which I have continued using this agent, I have become more and more convinced that we have in the x-ray the best single therapeutic aid in the treatment of skin-cancer. The opinions expressed in that paper have been substantiated many times, not only by myself, but by hundreds of others, so that I feel warranted at present in emphasizing certain features of this treatment.

In the pioneer days, I well remember this treatment was considered a "personal-equation" treatment. Those who had thoroughly qualified themselves obtained results which the tyro could not duplicate. Even today there remains room for improvement. There still are too many failures with this treatment, but most of which could be avoided by a more perfect mastery of all the conditions which confront the operator.

Causes of Failure

Many practitioners fail to get the full therapeutic worth of this remedy, because they use inefficient apparatus; some fail because of inefficient technic; still others fail for lack of both. Inefficiency is the reef upon which many x-ray workers' hopes have been wrecked. The extraordinary zeal with which many practitioners undertook this treatment, and which caused them to apply the ray without studying it or knowing how to use it, was responsible for many failures.

Some have been disappointed, because they thought the treatment so very simple and easy, requiring no particular skill or knowledge in its application, that they simply bought apparatus and allowed office-girls, nurses, and other nonmedical assistants (all of whom knew less about the subject than did the doctor) to give the treatments. We should not expect ideal results to follow applications made by those whose training has not qualified them to undertake such work. Failure could have been predicted from the start.

Very naturally, the value of this treatment cannot be very accurately determined by such unscientific work. In the bitterness of their disappointment, however, these careless x-ray users are apt to say that the treatment is not good, and some even go so far

as to denounce those who dare contradict them.

If those unskilled in the use of x-rays have failures, they should study and learn how to apply them properly. The x-rays should not be discredited; they will continue to do their useful work if properly directed. I also realize more and more another difficulty in the x-ray treatment of cancer, namely: that the practitioner who might be a good dermatologist is not always well versed in electric matters; while, on the other hand, the "radiographer" who knows how to make very good x-ray pictures may know little or nothing about pathology and dermatology.

The truth is being pressed home constantly that the days of careless or haphazard applications of the ray are numbered. The common practice of giving patients x-ray treatments, without considering the quality and quantity of the agency, must be abandoned.

Having grown up with this subject and being a teacher of x-rayology from the very beginning, I realize probably more than most x-ray workers do what a large variety of generators, tubes, interrupters, and currents are used today for obtaining x-rays, and the consequent confusion and handicaps which the average operator contends with in his daily work.

Such things as delicate meters and other current and x-ray unit or measuring devices are, and always will be, too unreliable and impracticable for the average practitioner to use with satisfaction. In proof of my contention of the unreliability in-exactness and impracticability of these unit devices I need only state that there are at present about a dozen of these. The fact that there are so many alone is sufficient to condemn them. If one or two were really scientific, we should not need the others. Therefore, we must supply the x-ray operator with a technic that he can use, and which will be fairly accurate, yet flexible, and the use of which will not necessitate the purchase of expensive and ephemeral unit devices.

What Does the Work?

To understand this matter of the proper handilng of x-rays in the treatment of skin-cancer it is necessary to know what it is in the x-ray that produces the results that we are after. I will go briefly into the question of the physics and action of the ray as it pertains to therapeutics.

I believe that the actinic, or chemical, rays, which come with the x-ray, are the most valuable of all the rays in the treatment of skin-cancer, and for that matter in the treatment of practically all other surface, or skin, diseases, and, therefore, these rays should be utilized to the limit by exposing the lesion as directly as possible to their direct influence.

It has been proven that these chemical rays have a direct influence on the oxidation-ferments of tissues. If used excessively, they bring about a breaking down, or splitting up, of the complex chemicals composing cancer-cells, and in that manner destruction of a malignant growth is ultimately brought about. Pathologists tell us that it is an established fact that the efforts of nature to throw off cancerous disease are always along the lines of establishing hyperemia, hyperleukocytosis, and abnormally intense proliferation of connective-tissue cells. In this matter, the x-ray may be said to follow nature, for that is exactly the effect the x-ray produces in the tissues.

If this assumption is true, it follows that the lesion should always be exposed to the direct influence of the x-ray, i. e., the skin-cancer should be uncovered, freed from dressings and protectives of all kinds during the seance. It probably is needless for me to add that metal, leather or other socalled "filters" must not be used during the treatment.

My Modus Operandi in Procedure

The method of treatment adopted by me in cases of skin-cancer is as follows:

There are five factors that must enter into consideration in devising a system or technic for treating with x-rays, and these are: (1) the vacuum of the tube; (2) the distance of the tube from the part to be treated; (3) the nature of the light or fluorescence in the luminous hemisphere of the tube during its excitation; (4) the duration of each treatment; (5) the frequency of applications.

I believe that when we consider these five factors relatively, then our control of the x-ray can be made fairly accurate, safe, and still be flexible. I am even willing to affirm that our control will be more accurate than with the ephemeral unit measuring devices that are becoming more and more numerous.

Skin-cancers, in my opinion, demand large doses of x-rays from the very beginning. There should be no hesitation in using the ray so as to get the most energetic action. The patient's life may depend upon such treatment. Since it is desired to produce localized irritative effects and since no penetrative rays are needed, the lesion being superficial, and, also, since a comparatively low

vacuum-tub pr duces soft rays, which are most irritative, a tube offering 1 to 2 inches of air-resistance is used in the treatment of these cases.

The tube must be kept at this low vacuum throughout the sitting. For this purpose, automatic regulating vacuum-tubes are best. I believe that this matter of vacuum in the tube is a very important one. Most operators use too high vacuua for this work.

We must keep in mind that where the rays stop, there is where we get the greatest benefit. The tube should be excited with a steady current, so as to produce a constant light in the luminous hemisphere. Flickering or "flashing" of the light, as Cook has pointed out, produces a stimulating, i. e., physiological, effect upon tissue-cells, and, therefore, treatments given with an intermittent current are worse than useless, as they may stimulate rather than retard the cancer. There must not be any spark-gaps in series between the generator and the tube.

The interrupter, also, is of important consideration if an induction-coil is used to excite the tube. In my opinion, the best interrupter for this purpose is the mercury-turbine. All other types of interrupters work too irregularly to be considered ideal. The fluorescence in the luminous hemisphere should be bright—nearly as bright as when exciting the tube for radiography.

In this connection, it might be in order to say that the amount of electricity which comes from the generator cuts comparatively little figure, for it is a well-known fact that the curative effects of the x-ray are the same whether a weak current (for instance a static-machine current) or a strong current (transformer current) be used.

My plan is, to give short treatments—ten minutes at a sitting. I also give them often, so as to be able to judge the susceptibility of the individual. I think the oftener the dose is repeated, in judiciously small doses, the better the results, as compared with larger doses less frequently given. I am not a believer in the three or four large-dose treatments, i. e., 30- or 40-minute exposures. I am sure the shorter exposures and more frequent treatments give us more control, and, therefore, more safety.

Treatments are kept up daily until a reaction comes on. This is shown by the development of dermatitis. When the dermatitis appears, I stop to wait for it to subside. After the parts become normal again, the treatment may be resumed, if it is found necessary.

We must remember that skin-cancer is a chronic disease and, therefore, is not susceptible of a cure, under the most favorable conditions, within weeks, and sometimes months, of time. Consequently, considerable time may be needed in a given case. Many operators fail to get results from this treatment because they do not ask for enough time in which to produce results.

It is not unusual in my practice to have cases referred to me in which the patient has been under the care of an x-ray operator for only a short time during which but a few treatments were given. After I assume charge of the case and give a few additional x-ray applications, a reaction comes on. The patient is now pleased, for he sees a change in his condition, and I get all the credit. I seem to have achieved without difficulty that which another, struggled in vain to accomplish. Yes, the patient should be told in advance that time is necessary for a cure, and if he isnotable or willing to give us the proper amount of time then we ought not to undertake to treat him.

I also wish to lay emphasis on the fact that technically we wish to utilize the destructive properties of the ray in cancer cases and, therefore, these particular properties should be brought to bear upon the lesion as directly and vigorously as it is possible to do. I hope to encourage vigorous raying of these cases, as by so doing we shall get the limit of value from the x-ray.

Occasionally it has been found that when the mucous membranes of the eye, nose or mouth are involved the good effects of the ray are but transient. When this is the case, we should not be discouraged; on the contrary, the patient should be given another series of sittings, and this time the remedy ought to be given vigorously enough to produce a sloughing x-ray ulcer. By this heroic method, I have cured several cases which at first, under the simpler method, received only temporary benefit.

As to Protective Masking

The rays should always be localized by means of metal cylinders, specula or lead masks, which localize their action, thereby destroying the diseased parts without needless injury to the healthy tissue.

My own method (one which I suggested fourteen years ago, and which I have used with but slight modification ever since) is, to cover the body for a considerable distance around the lesion with Grubbe's x-ray foil (a thin foil, only the 1-1000 of an inch thick, containing 95 percent of lead and 5 percent of

tin), to protect the healthy parts. A hole is cut in this mask about 1-8 inch larger than the area it is desired to treat. In this way I expose a small area of normal tissue to the ray, and when cumulative inflammatory signs appear I am able to detect them, for the diseased area may be normally so inflamed that x-ray dermatitis could not be recognized.

I believe in raying a small border of healthy tissue for another reason, namely: the x-ray irritation causes a dilatation of the blood-vessels at the very edge of the healthy tissue where it blends into the lesion. It is usually from this irritated edge of healthy tissue that the healing proceeds.

In cases where the glands or lymph-nodes are involved, I also expose these channels to the x-ray at each sitting; but here I use a weaker ray—a physiologic rather than a toxic ray, as it is my object to stimulate these parts, not to destroy them.

We must never forget that success of any treatment does not necessarily depend upon the treatment *per se*, but to a very great extent upon adjunct treatment, which may be needed from time to time. In this connection, it should be realized that cancerous tissues are very liable to become infected, and when this occurs the inflammatory and ulcerated conditions are magnified.

For these reasons, it is very essential to keep a cancerous ulcer clean and free from infection. The physician must carefully instruct the patient or his attendant as to the right way to keep the lesion clean. In addition, whenever the patient comes to the office the physician should inspect and then himself dress the sore. I use as a cleansing agent a saturated solution of potassium permanganate made with hot distilled water. This is used as frequently as seems indicated. Once or twice a day, if needed. Drainage must always be perfect. If there is a tendency to scab or crust formation, these should be soaked in water as hot as can be borne and removed. Other therapeutic adjuncts, either local or systemic, should be used if indicated.

In concluding, I will refer briefly to the results of this treatment. I believe I had the honor of applying some of the first x-ray treatments that were given in skin-cancer, and in the many years since I began this work I have treated a large number of cases.

At present, I will concern myself with 216 cases, most of which are old enough to allow me to form a definite opinion concerning the ultimate outcome of the treatment. This does not include many whom I still have under observation, neither does it include some whom I now have under treatment. This series includes a large number of hopelessly incurable cases (patients who utilized the x-ray as a last-resort treatment) which I was more or less compelled to take for treatment during the earlier years of this work and, as I should now say, against my better judgment. These would be considered undesirable cases for showing the possibilities of any method of treatment. The cases consist of lesions on practically every part of the body and include epithelioma, rodent ulcer, and carcinoma; primary as well as secondary or metastatic growths.

Analysis of my records shows that in 16 cases involving the eye results were considered good in 11; beneficial in 3; failure in 2. In 10 cases involving the tongue, roof of mouth, and fauces, results good in 6; beneficial in 1; failure in 3. In 12 cases involving the labia, vagina, urethra, and uterus, results were good in 8; beneficial in 2; failure in 2. In 36 cases involving the nose, cheek, and ear, results were good in 29; beneficial in 3; failure in 4. In 38 cases involving the lip, mouth, and chin, results were good in 27; beneficial in 6; failure in 5. In 13 cases involving the rectum and anus, results were good in 10; beneficial in 1; failure in 2. In 5 cases involving the penis, bladder, and scrotum, results were good in 3; beneficial in 1; failure in 1. In 22 cases involving the forehead, temples, and scalp, results were good in 15; beneficial in 4; failure in 3. In 29 cases involving the fingers, hand, arm, foot, and leg, results were good in 22; beneficial in 5; failure in 2. In 24 cases involving the breast and neck, results were good in 14; beneficial in 5; failure in 5. In 11 cases involving parts of the body not included in the above classifications, results were good in 7; beneficial in 1; failure in 3.

It can be seen that the results which I have been able to obtain by this method of treatment are certainly very satisfactory, and when you remember that many of my cases in this list were considered hopeless—the x-ray being the "*dernier ressort*"—you will conclude with me that no other treatment known today could make so good a showing.

I feel justified, by reason of my many favorable results, in stating that 80 percent of cases of uncomplicated skin-cancer can be cured by x-ray treatment. I am also of the opinion that all cutaneous cancers should be treated with the x-ray exclusively, for it has earned the right to be considered the most valuable single remedy in this form of malignant disease.

Some Accuracies of Practice

The Correlation of Precise Methods of Diagnosis and Treatment

By B. G. R. WILLIAMS, M. D., Paris, Illinois

EDITORIAL NOTE.—This is the second in Doctor Williams' new series of articles. In these articles he is telling how to apply the knowledge given by the clinical laboratory. You have learned that there are certain abnormalities in the urine, for instance. Now, what shall you do to correct the trouble? By reading carefully the instructions given in these papers, we believe your task will be made a little less difficult.

IN APPROACHING the subject of albuminuria and its therapeutic indications, I feel justified in proposing a classification which, though scarcely satisfactory from an etiological standpoint, in our present state of knowledge of clinical albuminuria is the best that can be submitted.

The Nucleoproteids

To a dram of the filtered urine, is added 4 drams of cold distilled water and then a drop of glacial acetic acid. The mixture is well shaken, but not heated. Controls with normal urine should be set up alongside. In some urines thus treated, we shall note, after a short time, a cloudiness due to nucleoproteids. The chemical consideration of these may be found in most texts upon physiological chemistry and cannot be undertaken here.

Suffice it to say that this is a specific form of albuminuria, and is not without a diagnostic importance. For an albuminuria (as shown by tne heat and nitric-acid test) which proves to be a nucleoproteiduria (as shown by the reaction indicated above) is very strong evidence that we are dealing with substances other than true serum-albumin; viz., combinations of neutralizing proteins with acids (nucleinic, sulphuric, taurocholic, etc.), fibrinogen, euglobulin, etc. In other words, I am inclined to regard any of the socalled albuminurias unassociated with renal lesions as *benign albuminurias*, quite easy of identification and of themselves demanding no special treatment, being indication of body defenses. Thus, we may dispose of many of the socalled functional albuminurias which have perplexed some of our most astute diagnosticians.

This test cannot well be carried out when pathological conditions of the kidney-pelvis, bladder, and urethra are present, because then, nucleoproteids are invariably found (destruction of nuclei of cells); but must serve rather in persons not having such lesions to eliminate nephrosis. It goes without saying that such albuminurias are usually transient, being commonly seen as the orthostatic, adolescent, epileptic, and neurotic albuminurias. About the worst they may do is, to beat a man out of a life-insurance policy.

Serum-Albumin

We are now ready to deal with true albumin (not "albumen," a term too generalizing). When a slight heat and nitric-acid precipitate cannot be explained by a nucleoproteid reaction or by the presence of calcium phosphate, or when such precipitate is marked or persistent, or both, we are dealing with true serum-albumin, a finding which is never physiological.

Serum-albumin may be derived in part from the blood, escaping through the glomerulus by virtue of general or local alterations in blood pressure, injury to the endothelium or secreting epithelium, or for unknown reasons. It may be derived from the kidney-tissue (retrograde changes).

Here we must halt; for it is presumed that the reader will examine or have examined the urinary specimen in the question of pus: I cannot undertake the study of the albuminuria of pyuria, microscopy being sufficient for the distinction. An exception is sometimes cited—renal phthisis, where the albumin precedes pus; but in these cases the secreting parenchyma is invariably involved and we are at least justified in diagnosticating a nephrosis. It is, however, very mortifying for an albuminuria to turn out to be a pyuria as soon as another physician is called. Parenthetically, it "cuts some ice" in the treatment. Do not neglect the microscope when dealing with albuminurias; do not neglect the microscope when not dealing with albuminurias.

Renal Albuminuria

First of all we have to deal with the true *renal* albuminurias. To prove a true renal

albuminuria, several points must be kept in mind, to wit:

1. The albumin must be serum-albumin; not nucleoproteid and not calcium phosphate. The identification of the former we have considered above. The latter does not usually confuse in filtered urines; but in case of question we may apply the suggestion of Winternitz, as follows: Wash the precipitate with hot distilled water until washings cease to give a marked cloudiness with silver nitrate; then pour over the precipitate, on the filter, a few drops of boiling Millon's reagent. A red coloration shows the protein nature of the unknown. Copaiba also may confuse; but the patient should leave off this drug while the tests are being carried out; or, the precipitate may be tested for alcohol solubility.

2. The albumin must be persistent or almost so.

3. The other serum-albuminurias noted below should be ruled out if possible.

4. Cylinder casts (other than an occasional hyaline), cells from the uriniferous tubules, red blood-cells (especially in casts), decreased urea, any or all of these are to be expected in an actual nephrosis.

Keeping in mind these points, we should rarely fail to put a renal albuminuria into the proper class.

Treating Renal Albuminuria

How shall we treat a true renal albuminuria? Unfortunately certain of these cases have become progressive by the time they have reached us; and treatment which a few months before would have cured the patient is less likely to do so. Ofttimes, however, cases which are apparently hopeless may still be aided or cured; and a few principles are here suggested.

All of this serum-albumin does not come from the kidney, but much of it from the blood; and it is probable that the patient does not have this albumin to spare. It is in just such cases that lecithin and nuclein, administered for prolonged periods, prove peculiarly efficacious. In acceptable form they provide exactly the reconstructive material demanded by the "discouraged" cells; and, the remote metabolic wrong being corrected, the drain ceases.

There is abundance of clinical proof that an active preparation of cactus grandiflorus, through its influence upon the heart and circulation, materially improves nutrition and reduces the output of albumin. Many well informed and observant therapeutists prefer cactus to any preparation of digitalis in such cases, deeming it indicated whenever cardiac irregularities and renal congestion exist.

It may then be advantageous to treat the albuminuria by aiming our efforts at the blood pressure; investigate the heart and arteries, and give digitalin (or cactus) or glonoin, with elaterin or some milder laxative, as indicated; and the albumin of circulatory origin will be held back except in so far as released by diseased kidney-tissue. I know of no way to prevent the escape of circulating albumin when the renal substance is already destroyed; we can merely check it by attention to the heart and arteries.

Can we decrease the serum-albumin resulting from cloudy swelling of renal cells and the ultimate plasmolysis consequent upon it? I think that we can; in fact, Martin Fischer apparently proves that this process is directly due (at least in many cases) to a storing up of acids in these cells and injury to the protoplasm. Thus, the indications are clear for dilution and alkalinization. In other words, we must prescribe water and alkalis freely (see the preceding paper) if we expect to decrease the albumin from this source. This will explain why alkaline remedies given with copious draughts of water, often produce such marked benefit in the earlier stages of nephritis.

One other suggestion: There is no lack of evidence that injury to the kidney cells depends to a considerable extent upon the presence of harmful substances in the intestinal canal, whether taken with the food or resulting from its decomposition. Hence, these patients should receive special care as regards alimentary housecleaning. They usually benefit when drinking purgative waters at some health resort; give them a course of "waters"—saline drainage—at home; and use suitable intestinal antiseptics to check any tendency to fermentation.

But as yet we are clutching only at the fringes of knowledge, for how may we successfully treat a disease until we know its cause? Who knows all concerning these nephritides and their albuminurias? In the absence of such information, are we not justified in the use of certain remedies now regarded as empirical but which tomorrow, when our research-workers have cleared up this baffling field, stand best chance of a place in our rational list? Of these, special mention is to be made of arbutin from uva ursi—bear-berry—a grain an hour being administered if necessary to make the desired impression. Gr. 1 every 3 or 4 hours thereafter usually proves sufficient. In a surprising

number of cases cactus and arbutin, given alternately in fairly full doses, meet the requirements fully. It is hardly necessary to call attention to the necessity of stimulating dermal elimination. Sponge baths of solutions of common salt—better, epsom salt—should be ordered, followed invariably by a brisk rub-down with a rough towel.

This is all I shall have to say concerning the medical treatment of the renal albuminurias as such. "Not enough," criticize my readers? Perhaps; but I have learned that one line of treatment persistently followed often accomplishes much more than a "running hither and thither." I have seen tuberculosis cured by a monotonous routine of months; I have seen leukemia held in check and apparently cured by pushing one drug for a year; I have seen whooping-cough, the disease of a thousand remedies, cut down to three weeks, from discouraged Osler's "six weeks and—," by a bottle of something better than paregoric.

The textbook tells you to try a little of this for a short time, and, if you don't succeed, you might try a little of something else. Bah! Give each remedy a fair trial; albuminuria does not appear in a day, nor can it be cured as quickly as that. The treatment suggested above is not claimed by me to be the best. You may know of a much better way of treating albuminuria of the renal type; but do not be discouraged if spectacular results are not witnessed within a few days—aye, a few weeks.

Hints About the Diet in Renal Albuminuria

Just a word as to the diet. At this point I cannot well undertake the dietetic consideration of the various nephritides as suggested by other laboratory findings, by symptoms and by signs, but rather from the standpoint of albuminuria. What effect, if any, does diet have upon the albuminuria?

I am told that *excessive* ingestion of proteids may increase the serum-albumin in the urine; and a study of several cases leads me to believe that this may be true.

What of it? Must we in consequence take from our patient proteid foods when he needs them to make up for those albuminous bodies passing away in his urine? Certainly not. There are extremes in either direction. Entirely distinct from the alimentary proteiduria following the heavy proteid meal, are the renal albuminurias.

Scalia has shown that when egg-albumin is injected *subcutaneously* there may be an induced albuminuria in nephritics; but I doubt very much whether upon a mixed diet including eggs precipitin tests would show egg-albumin in such a urine. Krasnogorski has shown that the albuminurias of infancy contain no specific groups characteristic of the dietetic proteids, but that the bodies are derived entirely from the tissue-albumins.

In chronic albuminuria, the indications are much different from acute nephritis. In the latter, the fight is short and dietetic measures may be rigid. But how may we expect to lengthen the lives of our chronic nephritics by starvation? I have seen these patients who were taught by some quack or shortsighted physician, test their own urine for albumin day after day, cut short their own miserable existence and make life almost unbearable for their friends. Elsewhere I have shown that quantitative estimations of serum-albumin are of almost no prognostic importance and rarely of diagnostic worth.

A mixed diet is to be advised, and this must contain proper proteids; milk, eggs, even meats (especially the white meat of chicken, according to von Noorden), and vegetables. An absolute milk diet may be advisable for a few days in acute Bright's disease; but it is never desirable in chronic nephritis, inasmuch as it contains too much albumin, and for the twenty-four hours may contribute much more of these substances than does a mixed diet.

Albuminuria may be better treated from a dietetic standpoint; not, indeed, by special attention to the proteid foods, but by eliminating irritating substances—alcoholic beverages, red meats (kreatin), condiments. Of the latter, sodium chloride holds first place; and for this reason milk diets (not exclusive) are advisable, as we shall see in a later chapter. Beans and other foods which lead to fermentation obviously are unfit for the nephritic.

Toxic Albuminuria

Toxic albuminuria has proven itself a very elusive subject, mainly for the reason that it is difficult to tell just when a toxic albuminuria becomes a renal one. In certain cases, undesirable albumins may be elaborated in the tissues and be actively excreted by the kidney without damage to the renal parenchyma. Thus, the blood may not be able to use lymph-albumin in large amounts.

However, it is not unreasonable to suppose that in certain infectious diseases (where toxins are present in the blood), in the intestinal intoxications, and where poisons have been taken, a slight albuminuria depends upon the fact that the endothelial cells of the

capillary tufts or the epithelial cells of the Bowman capsules suffer for a short time disturbances in nutrition, thereby permitting the escape of true serum-albumin and perhaps globulin from the blood, although there may be no permanent injury to these cells.

This question is an interesting one from the therapeutic standpoint. How shall we treat such an albuminuria? Shall we treat this condition at all? I do not think we should do so, except in so far as we direct our attention to the specific poison responsible. This does not mean that I should thus dismiss such an albuminuria as unimportant, for we know, of course, that at any time it may become a true renal albuminuria.

Thus, in syphilis, scarlet-fever, and to a less extent in other infectious diseases, we have to face this perplexing question. In the protracted intestinal intoxications, for instance, we are unable to locate the exact point at which the albuminuria becomes nephric. In case of question, apply the principles of treatment already indicated; however, if possible, first prove a renal lesion present by the four rules which I have advised.

Mechanical or Obstructive Albuminuria

The obstructive or mechanical albuminurias present a great field for study, not alone for the therapeutist, but for the diagnostician as well. I have seen urines almost viscid with serum-albumin, when it was fairly certain that there was but slight if any renal damage. Thus, in the liver cirrhoses and allied conditions, we often note putty-like precipitates when the urine is treated with heat and nitric acid. Here urobilinogen may or may not be present, depending (as will be shown later) upon the extent rather than the character of the hepatic injury. Certain of these cases will be associated with ascites.

Once having shown that the albuminuria is not renal, but mechanical, we are ready to look into the treatment.

Digitalin is indicated in any venous engorgement of the kidney, especially if there are indications of cardiac dilatation. But we must remember that digitalin will aid the heart for but a short time and will not cure. Cactus may replace it with advantage. If the liver lesion be a syphilitic one, mercury and especially the iodides are called for, and the results often will be startling. The ascites and albumin will vanish in a large number of these cases. Now and then the interstitial changes in the liver will have proceeded so far that antisyphilitic treatment will avail nothing. Then do the indications become identical with those of any hepatic cirrhosis.

The treatment of the *albuminuria* (and ascites) *of cirrhosis* in general, from a medical standpoint, is that proposed for any edema, namely: (1) purgation by means of saline cathartics or elaterin, or both, in dosage sufficient to produce free watery stools; (2) diaphoresis, especially by the aid of the hot-air bath and of pilocarpine.

The more severe cases call for Talma's operation, whether ascites is present or not; for this treatment is more likely to be effective before ascites is marked and it will relieve the venous engorgement of the kidney before permanent injury results. In other words, it seems to me that the operation promises more in the early cases diagnosticated mainly by the uranalysis. In the late cases, where we also have to deal with ascites, repeated tappings are necessary to make the Talma's operation successful. Unfortunately the operation has been advised only in the late cases.

Digitalin is strictly indicated in those mechanical albuminurias associated with valvular lesion. Here the area of cardiac dulness is great and evidences of renal involvement are not forthcoming. Combine rest in bed, elaterin, and diaphoresis with the use of digitalin. Failure of these methods to clear the urine of albumin will raise the question, Is this, after all, a heart albuminuria, or have we also to deal with renal or hepatic lesions? Uncommon examples of mechanical albuminurias due to renal engorgement are those of venous thrombosis, and so on.

Cryptogenic Albuminurias

Especially baffling is the treatment of the cryptogenic albuminurias where the blame cannot be definitely located upon renal, toxic or mechanical causes, though any or all of these may play a part. Unless symptoms are pressing, we are not justified in diagnosticating cryptogenic (clinical) albuminuria by merely a single urine test, for we may be dealing with an albuminuria of an alimentary or other temporary form. We may be deceived even in the pressing cases, and this applies, as I have found, in the case of meningitis, where fever is not present and, so, the toxemic nature is overlooked. I have seen these cases diagnosticated as acute nephritis, upon the basis of an improper study of the case, especially of the urine.

Because we do not appreciate the nature of a given cryptogenic albuminuria, we can-

not apply to it simple therapeutic principles, but must approach it as though we were dealing with a combination of the other forms. Thus, in puerperal eclampsia, we must assume the possibility of toxic, renal, and mechanical factors, although we believe that of these the first-named is, perhaps, the most important.

The Albuminuric Kidney of Pregnancy

Shall we treat the kidney of pregnancy? No. Shall we treat the albuminuria of pregnancy? That depends upon what is meant by the albuminuria of pregnancy.

In about 10 percent of all pregnant women, urine tests by heat and nitric acid will show various degrees of cloudiness. A few of these may be explained by nucleoproteids, and many by contamination with vaginal secretion—a frequent occurrence among pregnant women. (Fresh specimens taken without special cautions show many miscellaneous bacteria and vaginal cells.)

In perhaps about 3 percent of pregnant women where specimens are properly collected (use a sterile catheter, if there is question), we may find serum-albumin that is persistent or almost persistent. By all means, treat such an albuminuria. How? First determine whether this is a true renal or a mechanical albuminuria; or, if this is impossible, assume it to be toxic or at least cryptogenic, and then make the treatment as rational as possible.

For example, serum-albumin is found without evidences of renal or mechanical causes: do not assume these to be absent (because of the importance of these cases from a clinical standpoint; knowing, as we do, that symptoms are likely to develop very abruptly). Continue a diagnostic study of the case, but lay special stress upon the treatment of any toxemic conditions likely to be present.

First apply those principles known to be efficient in any toxemia; which are:

First, prevent waste.

Second, eliminate waste.

Moran has ventured the opinion that milk is the food *par excellence* for threatened eclampsia; but I would not advise a rigid milk diet unless it is certain that nephric factors play no part, and for the reasons I have detailed above. Better use milk as a nucleus and build up a suitable diet about this. Use buttermilk in part (this for the sake of the colon), unless diarrhea is present. Prohibit foods likely to be broken up into toxic substances—black meats, cheese, beans, and so on. Avoid sodium chloride unless you are assured that nephric factors play no part. Begin with a saline cathartic, and keep the bowels open.

If the urine is highly acid, exhibit alkalis or alkaline salines. If diacetic acid or acetone is present, push the alkaline treatment. Push the sulphocarbolates for three days, then follow with galactenzyme for three weeks, to aid in solving the bacteriological problems of the colon. If the urine is concentrated, prescribe water (see the preceding paper). Increased cardiac dulness and blood-pressure alterations provide indications in certain patients that will aid in the successful treatment of the albuminuria.

Do you carry out or have carried out prophylactic urine examinations in your pregnancy cases? No? Then I will not tell you what I think of you. Certainly the albuminuria of pregnancy demands treatment. *Do not treat eclampsia. AVOID IT!* If I were to enter upon the treatment of eclampsia, I should not only desert my subject, but I might leave room for the belief that, after all, the prophylactic uranalysis and treatment of albuminuria of pregnancy was uncalled for.

(*To be continued*)

THE TORCH

By Albion Fellows Johnston

Make me to be a torch, for feet that grope
Down Truth's dim trail; to bear for wistful eyes
Comfort of light; to bid great beacons blaze,
And kindle altar fires of sacrifice.

Let me set souls aflame with quenchless zeal
For great endeavors, causes true and high.
So would I live to quicken and inspire,
So would I, thus consumed, burn out and die.

The Survey

The Conflict of Conscience*

I. Disturbing Emotions

By CHARLES GILBERT DAVIS, M. D., Chicago, Illinois

EDITORIAL NOTE.—In this address, which was delivered at the last meeting of the Tri-State Medical Society, held in Hannibal, Missouri, Doctor Davis discusses certain vital emotional factors in disease. The investigations of Freud and Jung have intensified their interest, and this paper points out the line of duty for the physician. It will be continued in several future issues of Clinical Medicine.

. . . . I feel within me
A peace above all earthly dignities,
A still and quiet conscience.
—*Shakespeare.*

THE progress of human thought is the most wonderful theme that can occupy the mind of man. Not only is this study of interest in revealing the long evolutionary struggle of conscious sensuous life, through eons of time, to realize its environment, but we find it also prophetic as to what we may expect and hope for the future.

No branch of science claims our attention in either of these directions with greater enthusiasm than the healing art. To write the story of the development, progress, and growth of medicine, would be practically to relate the history of mankind. However, three great periods of development are readily distinguished.

1. In the early twilight of knowledge, we note the physical interpretation of disease. The morbid manifestations were attributed to the presence of an entity. The practice was very simple: the entity by harsh physical means or superstitious incantations was to be scourged and driven from the body.

2. Then came the *rénaissance,* when the struggling mind, freed from the bonds of ecclesiastical oppression, began to listen to the voice of reason and to search through the treasure-vaults of nature for the cause of things. The human body was dissected, the circulation of the blood was demonstrated, and physiology became a recognized branch of knowledge.

Bacon established his inductive philosophy and Emanuel Kant followed with his "Critique of Pure Reason." All other branches of science were called upon to contribute to the wisdom accumulated for the cure of disease. This period may be said to have closed with the wonderful discoveries in bacteriology and pathology. It has been the *triumph of the objective mind.*

3. Today we may be said to have entered upon the third, and last, developmental period. It is the age of mind, and we appeal to the psyche.

As in all great movements, there has been resistance. Any radical change occurring in the tide of long-established thought always is accompanied by a tempestuous storm of protest. In no field of human thought or action has the contest been more severe than that waged between the various adherents of the mechanistic and of the vitalistic theories of evolution.

But science is becoming more consistent and dreamers more rational. The victory is won—and, behold, a new *rénaissance.* It is the *triumph of the subjective mind.*

Man is as a tripod—a body, a mind, and a soul. Man manifests himself through these three avenues of life. In the normal functioning of these three phases, he lives and evolutes toward perfection. A morbid manifestation of any or all produces disease and tends toward degeneracy. He may experience a traumatism in either sufficiently severe to prove destructive to life.

It is along these three respective avenues that medicine has sought, and is seeking today, to cure disease.

In entering this realm of mind, it is evident that we shall be called upon to deal with dynamic forces of far more wonderful scope and influence than have been dreamed of while we were dealing with other known physical laws.

Psychology—the soul of things—is the latest measuring-rod of truth, and by its correct application we are making headway rapidly in a new and more satisfactory explanation of many of the mysteries of life.

I am confident that along this line of research are to be demonstrated some of the

*Delivered before the Tri-State Medical Society at Hannibal, Mo., September 24, 1913.

most startling truths relative to man and his future destiny. When once the light of science is thrown down this pathway, it will reveal a new interpretation of many mysteries and enable us to solve many of the political and economical problems that are now bearing heavily on the conscience of modern civilization.

The Influence of the Mind over the Body

The question as to the effect of thought upon the bodily functions and the immediate or remote consequences of such thought or emotion has long been a subject discussed in almost every stratum of human intelligence, and, while long held *sub judice* by scientific men, it never has received the attention of scientific investigation which it deserves.

Mind, there can be no doubt, is the dynamic expression behind all cosmic movement. Man, as the crystalized center of this intellectual and moral force, through generations of his race has more and more struggled to make himself master of his environment. Not only has he sought to conquer the antagonistic influence of his surroundings, but, through autosuggestion, has been able to shape, mold, and modify his own physical nature.

We are now only on the threshold of the knowledge leading us to a thorough understanding of the influence of emotion upon the various organs of the body, but already sufficient scientific data have been gathered to enable the fact of such action to be demonstrated and to give intimation of our ability to utilize such action for the progress and happiness of mankind.

We are able to discern from our everyday observation of life the truth of the assertion that thought—and especially emotional, or disturbing, thought—is capable of manifesting itself through the functions of the various organs of the body.

The lachrymal gland, through fear, anger or joy, may be stimulated to increased activity and be made to secrete and discharge the tears in large quantities for hours at a time.

When the body is in need of nourishment, the thought of savory dishes that in the past have pleased the palate will cause the salivary glands to become active, and soon the mouth is moistened with the flow of digestive saliva.

Under the stress of any sudden and deep emotion, the blood pressure is increased, the action of the heart becomes rapid, and the whole vascular system responds to the flow of tempestuous thoughts generated in the area of consciousness.

In a similar way, a thought may disturb the vasomotor centers and tinge the hue of the cheek with the modest blush of the maiden. Then, again, under the stress of fear, we have the ashen hue of death; while in the height of anger the countenance is purple from the distended vessels.

Respiration is another function that may be stimulated or inhibited, according to the nature and intensity of the emotion. In a moment of great danger, when the mind is overwhelmed with fear and anger, the respirations are deep, the nostrils distend, and the breast heaves with the effort to increase the oxidation necessary for increased power in the effort at defense or rescue. So, from sudden shock on the receipt of news of a great calamity, respiration is stimulated, or for many seconds it may be inhibited entirely.

Many times soldiers have told me that when first entering battle soldiers are seized with the desire to evacuate the bowels and bladder. The child of sensitive nervous system, while standing by the flowing brook and listening to the ripple of the water, receives the suggestion and at once feels a desire to urinate.

When I was a boy I often mischievously amused myself by watching my younger brother till he had finished eating his piece of bread and butter, and then, as the last mouthful disappeared, suddenly shouted at the top of my voice that he had swallowed a fly. The suggestion was almost instantaneously followed by emesis, and he gave up his dinner. I remember this quite well, for on several occasions the facts were deeply impressed upon me by coming into vigorous contact with my mother's slipper.

A thousand instances might be related convincing us of the marvelous influence of the mind upon the functions of the body.

Corroborative Scientific Examples

We have not only these observed facts of everyday life, but numerous scientific laboratory experiments bearing additional and conclusive evidence of our contention are now before us.

Thus, for instance, Hornberg[1] demonstrated that the mere chewing of agreeable food caused a flow of the gastric juices, while the mastication of some tasteless substance had no affect.

Pawlow introduced a tube into the stomach of a dog and proved that the gastric juice flowed copiously when the meat was simply held before the animal's eyes.

These experiments have been verified by Bryan and others. Numerous observations have also practically confirmed the belief that emotional states materially effect the secretions and the peristalsis of the intestinal canal.

A series of interesting experiments by W. B. Cannon and D. de La Paz[2] indicate the marked influence the emotion of fear exerts over the secretion of the suprarenal glands. These experiments were made on animals, and they show conclusively that the adrenal secretion can be augmented through fright and continued fear.

An interesting hypothesis by George W. Crile,[3] relating to fear in its action upon the thyroid gland as a cause of Graves' disease, is worthy of consideration.

It has been proven beyond the question of a doubt that diabetes may be produced by rage or fear.

Numerous cases are on record in medical literature where sudden shock from fright has been followed by acromegaly.[4]

Forbes Winslow[5] mentions the case of a young peasant whose hair turned gray in a ew hours from fright when he was suspended by a slight cord over the edge of a precipice.

Instances are presented daily before every busy practitioner where there are evidences of morbid conditions arising from the disturbance of the internal secretions, consequent upon shock from great emotional activity.

How frequently do we hear, "She returned from the funeral, was taken ill, and lived only three days." What killed her? Emotion—deep grief. Fear paralyzed the centers of nutrition, lowered the resisting power, and the bacilli did the rest.

The sensitive girl is engaged to be married. The lover fails to return. We have all witnessed the tragedy! Day by day the color fades from her cheeks, the once animated life grows listless, the eyes lose their brightness, smiles are replaced by tears; the strength fails, hope is followed by despair, and then—there is anemia, disease, death.

This is no picture of the imagination, but one familiar to all the world. Grief, worry, fear are the dark angels that are reaping a harvest from the ranks of mankind.

P. K. Pel[6] reports a case of acromegaly, in a servant-girl, from fright.

Says Ernesto Lugaro[7]: "The injurious influence which protracted depressing emotions have on the appetite, on the digestive processes and on nutrition generally are well recognized. And it is not at all improbable that they can determine some autointoxications through the production of these disturbances of nutrition."

It is clear these injurious effects must react upon the nervous system, must diminish its powers of resistance to shocks of every kind and morbid influence, and must also lower the general resistance of the organism to disease.

Leopold Levi and H. de Rothchild[8] cite numerous instances where the emotions, acting upon the various ductless glands, have produced disease; depending upon the nature of the emotion, the previous state of the nervous system, and the age of the patient.

The sympathetic nervous system is the centripetal pathway of the emotional disturbance, and the thyroid gland plays an important part.

[9]Stokes, Groves, Trousseu, and Dieulafoy cite numerous instances of Basedow's disease caused by emotion.

Myxedema may be brought on by great sorrow. Also, through instability of the thyroid gland, we may have asthma, gout, and rheumatism. These diseases yield to treatment of the thyroid gland, and they may also be improved by an improvement of the emotional state of the patient.

Münzer[10] believes that all intense morbiden emotion, such as anger, fear, and worry disturb the glands having internal secretions.

I often have seen amenorrhoea result from some painful emotion. Gout frequently follows an emotional state. Time and again I have observed hemorrhoids to follow a long period of worry.

Laycock[11] many times has observed temporary diabetes to be owing to emotion.

Rubel[12] has mentioned the frequency of diabetes after the bombardment of Strassburg.

Cancer is said to have increased noticeably after the seige of Paris.

Desormeux, Duyes, Stork, Bracket, Underwood,[13] and others have cited casessho wing that convulsions in a nursing infant may be caused by violent anger on the part of the mother.

Unhappy emotional experiences have been known to produce various nervous symptoms, as fixed ideas,[14] obsessions, phobias, and so on.

Bickel[15] verified the experiments of Pawlow and demonstrated that the flow of gastric juice is inhibited by anger.

Experiments by W. B. Cannon,[16] A. T. Shohl, and W. S. Wright on animals prove that glycosuria may be produced by rage or fright.

Surely, we have sufficient evidence to convince us that the emotions play an important part in the determination of man's health and happiness.

The body has its pathological enemies in the various forms of bacilli, and the soul has its destroying agents in the morbid emotions of fear, envy, hate, and anger.

Harmony is essential to all life. Harmony with physical law is necessary to physical health. Logical thought is necessary to mental equilibrium, and equally so is harmony of the moral nature with the highest ideals of man.

All morbid emotions are destructive, but the greatest destructive agent of the race is man's warfare with himself, and the one that is most frequently the cause of all others. It is the constant violation of conscience going on in the world today that gives rise to most of the deterioration, this resulting in disease, poverty and unhappiness, leading to that degeneracy from which arises our great flood of vice, crime, and insanity.

Man, in his conduct, is at war with his highest ideals. Through this conflict of conscience, humanity is crushed to earth with fear.

It may well be named the tragedy of the world. The agonizing cry of this multitude of struggling souls surely is the most pathetic scene that ever has greeted the eyes of the universe.

(*To be continued.*)

More Special Stunts For General Men

A Series of Brief But Practical Therapeutic Suggestions

By C. ELTON BLANCHARD, M. D., Youngstown, Ohio

THIS short paper is to continue my plea for the family doctor, for the hard-working, poorly paid general practician. I am urging this brother of mine to be strong and to do things—not foolhardy, fools-rush-in-where-angels-fear-to-tread things, but the run of cases that have been sent hitherto, as a rule, to those who call themselves specialists. To him I say, Buy the tools for your office-work and learn to use them, on the learn-to-do-by-doing plan.

There are two good reasons why this attitude of the family doctor is a good one. First, it shows people generally that the doctor is progressive, competent, and a thoroughly up to the minute physician; and, second, it enables him to collect a goodly number of much needed fees. It is not my purpose to discuss the business side of the subject, still, just a word may not be out of place.

To begin with, have your fees agreed upon before the work is begun, and have the people bring the cash to pay when the operation or treatment is finished.

If by chance, now and then, you come across a case which you do not care to undertake to operate, either resign from it or arrange with a friendly specialist to do it for you, and not for the patient. The patient comes to you, and you take him to your specialist, and ought to be present when the operation is done; then attend your patient to his home or at the hospital, as the case may be. Make out your bill as agreed for the work, and pay your specialist yourself, letting the people you serve understand that your bill covers the whole service.

In this way, the specialist is your hired man, instead of you being his trade-drummer—for nothing or, perhaps, a commission. Possibly, after you have seen the operation done in a few of the cases you did not feel like undertaking, you will tackle those coming next, and do as well or maybe better.

About Nasal Polypi

Therefore, to this end, I want to say a few words about nasal polypi.

If you do not already know how to diagnose these very common neoplasms, I shall not be able to help you much in such a short paper as this; however, nothing in nature do they resemble more than oysters or grape pulps. Most of these growths are attached to the mucous membrane covering the middle turbinated bones. In long-standing and greatly neglected cases, they may grow to such size that complete nasal obstruction results and, hanging down into the postnasal pharynx, with long pedicles, may be seen through the mouth.

There is no treatment other than complete removal, although recently I had a patient who said the family doctor had given him a kind of snuff that was a "sure cure" for his trouble!

How to remove these growths and make them stay removed, is your problem, for they are prone to return and they grow rapidly after a little pruning by some careless operators. And this reminds me to say: Don't make a bluff at this work. There are already many doctors slicing off a little of the tonsil or starting a little blood from the nostril and calling it an operation; and most of them actually collect fees for this sort of practice!

I have long ago left off using or trying to use any kind of nasal snare. Your tools should be several sorts and sizes of curved and long-shanked scissors, two or three sizes of nasal cutting-forceps, sharp nasal curette, and also a nasal speculum that gives you perfect dilation of the nostril and good illumination.

Under local anesthesia with cocaine, anesthaine or quinine and urea hydrochloride, not only applied superficially but injected with a long-tubed syringe, you may cut, curette and clean out to your satisfaction without causing your patient much pain or distress.

At the first sitting, cut off the pedicles of such masses as you can easily reach and with your forceps pull out the growths. If the hemorrhage is free, you may have to pack and wait a few days for the finishing touches. The condition obtaining, both nasal and general, will be your guide as to whether to do both sides at the same sitting or not.

Often it is necessary to cut or scrape down to the bone, to prevent the return of the growth. For the last few years I have used silver nitrate as a caustic on the base-cells of such polypi, with good results. Some workers have employed injection of a saturated solution of potassium bichromate in the base-cells, to stop the renewal of growths.

Your patient should be seen twice a month for several months after the work is done, and any points that seem to be lighting up can be nipped right then and there.

Sometimes the growths involve the ethmoid cells, and, if so, your sharp curette must be wielded vigorously in order to reach the deeper portions of the neoplasm.

Sometimes it happens that you have a diverted septum from a large polyp or you may wish to correct such a diversion caused by anything else. It is a simple operation to break the septum over with your septum-forceps and to use the hollow nasal splint until the bone is fixed by healing in its natural position.

These patients should pay liberal fees, and when well done each will make you many new friends.

The Hypertrophied Tonsil

One more stunt—enlarged tonsils—then I have a word to say about the other end of the human machine.

Removal of the tonsils is the most frequent bluff that the family doctor has made at special work. After a case or two that gave him alarming hemorrhage, he has been more inclined to send these persons to the special man!

The important point is, to have the tonsil free from all adhesions, for until so freed any attempt to excise will lacerate the pillars of the fauces, the thing that causes most of the excessive hemorrhages.

With a blunt curved bistoury, the tonsil may easily be separated from the pillars. I usually choose the Mathieu tonsillotome, and pull the free tonsil into this to the proper extent with a grasping-forceps. If the one clip of this instrument does not bring away all of the tonsil, I then take the cutting-forceps to remove the remainder.

Good sense and judgment must be exercised in this little operation. When I say, to pull into your tonsillotome the tonsil to be excised, I cannot tell you how much or how little. Surely, you will know the danger that lies in pulling too much.

Be prepared for hemorrhage. Have ready your long hemostats and your pressure-hemostats, though you may never find use for them.

Now and then you will strike a "bleeder," and, if so, your nitroglycerin, atropine, and adrenalin generally will stop the flow of blood. Locally, compresses wet with solution of chloride of iron pressed over the bleeding capillaries will help. I have never met a case where one or two hypodermics of glonoin and atropine did not stop hemorrhage within a half hour.

In the case of very young children, you may have to call an assistant and give a general anesthetic; and the procedure under these circumstances is different. If your patient is young—ten to fifteen years of age and very nervous—an injection of the H-M-C will make him brave as a lion and docile as a lamb. Use the same local anesthetic as described for nasal work, above.

You must have good light, good tools, and be something of a mechanic. If you cannot meet these requirements, stay out of the game. Most family doctors can do this work

as well as any specialist, and the twenty-five or fifty will feel very good in your own pocket, because you have rightly earned it by being competent and doing good work.

Relieving Anal Fissure

It may be a long jump from the tonsils to the anus, but it is of fissure in ano I wish to say a word. Many patients have told me that this condition is as true a foretaste of the tortures of hell as anything they could imagine. In any event, you will make a very grateful friend if you can cure this trouble in one afflicted; and you can, if you will follow the plan here outlined.

Never mind the causes, the pathology, symptoms, and all that. Read it up, if you need to. Here is your patient; he says he has piles; bleeds at times; and the pain, smarting, and so on, are killing him. Examine him carefully. Many family doctors are so shy, they will not look at a man's anus, to say nothing of a woman's. Get in there with good light and proper speculums, and find out the real state of affairs.

All right; it is fissure, one or two; usually one, for one is enough for any decent man. Frequently dilation of the sphincter, gentle curetting, and local antiseptics will cause complete healing, especially if the fissure is first touched with nitrate of silver.

If this does not succeed, you may have to resort to making an incision in the floor of the fissure and curetting thoroughly. Then, with proper after-dressing, you will get a healthy granulation and complete healing.

I get made up for me an ointment containing menthol, thymol, camphor, eucalyptol, thymol iodide, resorcin, and the quinine and urea hydrochloride anesthetic. This applied to the part before and after the operation makes it almost painless.

What we wish to accomplish is, to change an indolent ulceration into an active granulation and as far as possible to prevent postoperative infection. This ointment seems to fill the bill exactly. Care of the anal toilet must be taken and, if the condition demands, pledgets of gauze with this ointment incorporated may be kept in position.

Some writers make a long story out of this thing and advocate some foolish and uncalled-for surgery, it seems to me, after some years of personal experience with many cases.

The treatment I have outlined may be done under local anesthesia and with no loss of time from business or work to the sufferer. In making your first examination, you should see to the anesthesia, for you are apt to cause your patient great discomfort otherwise, and he might not return.

I need not tell you that mild laxation, intestinal antiseptics, and all other help your patient may need should receive your attention.

Have your fee agreed upon for the work, and get it cash. It may surprise you when I tell you that for the past five years my loss from bad accounts will not average five dollars a year.

It was my purpose to mention fistulas and hemorrhoids, but these must go over until a subsequent issue, when I shall also discuss my treatment for gonorrhea.

WRITE down the thought that comes to you —the idea that seems worthy of communicating to others. Said Schopenhauer: "The presence of a thought is like the presence of a woman we love. We fancy we shall never forget the thought nor become indifferent to the dear one. But out of sight, out of mind! The finest thought runs the risk of being irrevocably forgotten if we do not write it down."

The Treatment of Urethritis*

The Use of Bisulphate of Quinine by Catophoresis

By C. S. NEISWANGER, M. D., Chicago, Illinois

A RECENT monograph by Albert E. Mowry, M. D., on the treatment of acute gonorrheal urethritis with irrigations of solution of bisulphate of quinine, interested me so much that I determined to make some observations with the same medicament upon the sequalæ of acute urethritis.

The essayist states in this monograph that the technic he employs does not apply to chronic cases, probably for the reason that the medicament does not reach the gonococci that have lain in the deeper folds of the epithelium for years.

Electrotherapeutists, however, are well aware that any medicament may be employed in treating the deeper tissues by utilizing the cataphoric action of a continuous current.

In using medicinal solutions for this cataphoric effect, we must keep in mind the fact that the basic constituent always moves toward the cathode (and this is true whether it be a metallic or an alkaloidal base), while the acid has just as strong an affinity for the anode.

If, then, the base is the part we wish to utilize, as is the case with the bisulphate of quinine, we must place the medicament upon the anode, when, by cataphoric action, in its endeavor to reach the cathode, the quinine is carried into the deeper tissues.

It has been my custom for some years to treat this class of patients by cupric catophoresis, and, while my results have been better than those claimed for any other method, the process has certain serious objections. For instance, the copper salts are styptic and irritating, and, although they undoubtedly destroy the gonococci when these are reached, the effect of the irritation produced frequently is not easily combated.

The electrode, which I devised some years ago, for making cataphoric applications within the urethra consisted of a hard-rubber tube closed at the distal end, and had perforations through which the circuit was completed. These perforations caused the mucous surface to become irritated, and, if great care was not taken, sometimes to be seriously injured, especially in inexperienced hands. This fault has been obviated by using a soft-rubber applicator very much the same as a soft-rubber catheter with perforations. This catheter is furnished with an applicator made of twisted copper wire, and has a receptacle for the cord-tip fastened to the proximal end.

The technic of use is simple. Wind some absorbent cotton on the twisted wire loose enough to permit being introduced into the soft-rubber electrode, then, after saturating it with a solution of quinine bisulphate—1 dram in 2 ounces—introduce it into the electrode. The applicator may also be introduced into the electrode before the cotton is wet, the instrument being held in the solution long enough to wet the cotton through the holes. The electrode now is thoroughly lubricated with a mixture of tragacanth or any lubricant that is a conductor of electricity—never vaseline or any oil.

After the patient has urinated, pass the lubricated electrode into the urethra. If the disease is in the acute stage, never pass the electrode beyond the pendulous urethra. The electrode is attached to the anode of a continuous current, the cathode being the usual abdominal pad. The current is now turned on gradually until 10 milliamperes is reached, which flow is maintained for ten minutes. The treatment may be repeated every second day.

For years is has been my rule not to treat or prescribe for acute urethritis, but during the past year, or since I have been using the procedure outlined in this paper, I have accepted a number of such patients for clinical observation. The most of my work of this nature, however, has been with chronic cases, the "morning-drop" and prostatorrhea.

I almost fear to go into detail as to my results, lest you might call me an enthusiast; so, I will just say, "almost universally good," and leave the proving of the assertion to those who will try it, firmly believing that their results will be as good as my own.

I am thankful for this opportunity of presenting to you a simple means of combating conditions more serious and far-reaching than the great "white plague," because so intimately related to that strongest natural

*Read before the Tri-State Medical Society at Hannibal, Mo., Sept. 23, 1913.

passion, sexuality. I am also pleased to be able to prove, at least in part, an assertion I have made many times in public and in private, to the effect that the rational method of curing gonorrhea must be by the cataphoric use of some germicide capable of reaching the gonococci that have lain in the deeper folds of the epithelium for years.

Pellagra and its Treatment

By E. H. BOWLING, B. S., M. D., Durham, North Carolina

THE cause of pellagra is still one of the unsettled questions of medicine. Each successive theory has had its champions, only to be discarded with the increased knowledge gained about the disease. I have no theory that can be proven, it being only upon circumstantial evidence that I have been convinced that the cause of pellagra is a specific organism, one which has not yet been discovered. When we remember how the spirocheta for years and years evaded the most diligent search, we need not despair of the pathogenic germ of pellagra yet being cornered and forced to reveal its identity.

My theory, then, as to the cause of pellagra—based, as I say, entirely upon observation and circumstantial evidence—is, that the germ first finds lodgment in the stomach—that is, the patient becomes infected—and though the great majority of observers believe the disease to be neither contagious, infectious or communicable in any shape, my own observations lead me to believe quite differently. I do not believe the disease contagious, but, I do believe it to be infectious.

At the present time I am treating a young married woman (and also her 3-year-old daughter) who presents a well-marked pellagra, and who up to a few years ago was as free from any suspicion of the malady as any healthy individual. At that time she was recently married, and, being a boarder, had no household duties to encumber her; while across the street from where she boarded I was treating a woman desperately sick with pellagra and of whom the neighbors and friends all were afraid. Then this young woman, out of sympathy, attended the patient faithfully until the end. She never experienced any ill effects until this last spring, when the dread disease developed, and that in a rather malignant form.

I have under treatment another young woman showing every evidence of robust health, but for the pellagra; and she, I am confident, contracted the disease from her father, who had been afflicted with it for several years. I could enumerate several other cases presenting a history similar to the foregoing, and all this convinces me that the disease really is infectious; still, the two cases cited will suffice for the object of this paper.

Then the question might plausibly be asked, Why do not more people contract the disease, when they daily come in contact with it? The same answer can be given as to why a whole household is not stricken when one member is attacked with typhoid fever, which is a known infectious disease.

The Stomach the Point of Attack

We might say that the natural resisting-power or the high opsonic index plays an important part, but, in the case of pellagra, I think there is another reason. I am firmly convinced that the stomach is the first place of infection, and I am of opinion that the condition of the stomach determines whether the exposed person contracts the disease or not.

For a while I thought that nonacidity of the stomach was a predisposing cause, for I found that in every instance of advanced pellagra there was a very greatly diminished or even total absence of gastric hydrochloric acid. However, the investigations of Siler and others have shown this theory to have been erroneous, because they found it possible for a person with hyperacidity to contract the disease; nevertheless, all investigators, so far as I know, have established a decrease in the hydrochloric acid in the advanced stages. This, then, being such a constant symptom, it evidently is caused by the disease, and is not a mere coincidence.

Another reason confirming my belief that the stomach is the seat of the trouble is the increased motility of the stomach. I called attention to this symptom some two years ago. When we give a test meal and then try to withdraw gastric contents for examina-

tion, we shall find the stomach entirely empty, except in very far-advanced cases, where there is a stomach paresis; in which latter not only the test meal but the debris of the meal before is brought up.

All of my patients, without exception, have given a history of indigestion or some trouble with the stomach dating back from six months to a number of years before the appearance of the rash. The stomach trouble always antedates the nervous or mental symptoms, which latter all observers acknowledge as the cardinal symptoms of the malady.

Granting for the present that this theory is correct, does it, then, not give us a chain of symptoms that easily can be adduced as leading to the trouble? First the germ is introduced into the stomach, where it finds conditions suitable for its propagation; then we have as a consequence of this irritation a subacute gastric catarrh, which interferes with the secretion of hydrochloric acid; while, as the catarrh becomes more deep-seated, less and less acid is being secreted, until finally it is completely absent. With the loss of the hydrochloric acid—which is one of the essentials to digestion—and with the otherwise crippled condition of the stomach, there follows, of necessity, poor digestion.

Now, the increased motility of the stomach forcing the imperfectly predigested food down into the alimentary canal, we have an ideal feeding ground for any and all pathogenic germs that may inhabit that region. So, in view of the formation of ptomaines, leukomaines, and many other deleterious substances, and which constantly are being poured into the blood current from the vitiated intestinal tube, is it any wonder that there results an irritated nervous system, together with all of its train of unnumbered symptoms witnessed in a pellagrin?

The skin eruption so characteristic of pellagra to my mind is of central origin—Mizell, with his brilliant theory of the semi-drying oils, to the contrary notwithstanding. So many doctors, it seems to me, make the mistake of looking upon the rash as the disease itself, and bend their energies toward curing that, when it is only a symptom of an irritated nervous system.

The Treatment Based upon the Gastric Infection Theory

Remembering the old saying that the proof of the pudding is "chewing the rag," now, will a treatment based upon my theory "deliver the goods"? I do not claim to have a specific nor a cure-all; still, I do think that my treatment, based on this theory, will cure as large a percentage of pellagra victims as any I know.

My first thought in instituting treatment, is, eliminate, and, for this purpose, the *sine qua non* in my hand is pure, unadulterated, old-fashioned castor oil. Of this, I give 1 tablespoonful every night; and I keep this up, sometimes, for six months, or sometimes even for twelve months. Then, if my patient does not get well and gain flesh and get the roses back to the cheeks, I do not know how much longer I shall keep it up.

I have in mind now a little strip of a woman, weighing 90 pounds, who took castor oil for a whole year and at the end of that time showed every evidence of perfect health and weighed 160 pounds; but when I consented to her stopping it for a few days she said she felt worse and went back to the oil of her own accord. Pay no attention to the cathartic effect of the castor oil; this will not last. Nor pay any attention to the diarrhea; castor oil is the very best remedy I have ever tried for the diarrhea of pellagra. This is the cleanout of the alkaloidal slogan.

Now for the cleanup. Pellagra is the only intestinal disorder in which I could never get satisfactory results from the sulphocarbolates. The only intestinal antiseptic that ever has done any good in my hands is freshly made chlorine-water, given in teaspoonful doses every two hours; and I keep this up for months and months, until I have made certain that the patient has been cleaned out and kept clean, until I know there is not a pellagra germ around.

Then I give arsenic, preferably in the form of the cacodylate of sodium, 3 to 5 grains, hypodermically, every other day until I get evidences of saturation. Oh, yes! I give iron in various forms. Usually I start with the elixir of iron and manganese peptonate; but I give also Blaud's pills with arsenic, and bone-marrow, ovoferrin, and other preparations. Codliver-oil? Yes. And the bitter tonics whenever I see them indicated.

Each patient is a history unto himself when you get him this far along in the cure. To the dictum of clean out, clean up, and keep clean you now can add build up, build up, build up. To every patient, without exception, I give castor oil; but it is not every one who can begin with chlorine-water. When the stomach is irritated, they simply cannot bear it. Under these circumstances, I start them on this combination:

Fluid extract condurango	ozs. 1
Tincture of nux vomica	drs. 4
Listerine	ozs. 1½
Carpeptic liquid, enough to make	ozs. 4

Label: A teaspoonful in water, three times a day, before each meal.

Give this mixture until the stomach is over the inflamed condition, then start with the chlorine-water.

For the neuritis developing in every advanced case, I give dilute phosphoric acid and nux vomica tincture in proper doses and in any agreeable vehicle.

Occasionally I give calcium sulphide, but I never have derived the same benefits as those following the administration of this drug in the hands of Mizell, of Atlanta. Urotropin is indicated sometimes, and I have seen cases in which I thought it benefited.

Reference to Specialists Advocated

With the experience garnered from treating more than 120 patients, I am satisfied that all pellagra victims should be referred by the general practitioner to the specialist. No line of treatment can be laid down which the doctor advised can follow with satisfaction to himself or benefit to his patient. To illustrate:

Recently I saw 4 pellagra patients huddled in the same room, but they were of different families. I did not give the identical medicine to all the patients; each one, in my opinion, requiring different treatment. Had I given each one chlorine-water, for instance, three of them would have been made worse, I am sure, while the one receiving it derived very marked benefit from its use.

This disease is reaching such proportions that, I am convinced, the time is ripe when each large municipality in the South should prepare a hospital for the treatment of pellagra, with a competent man in charge. The hospitals in my city are closed to these unfortunates, and they will eventually be closed to it all over the South. Then there will be nothing else to do but prepare places for the treatment of pellagra alone.

It may not be immodest for me to say that, for the last year, I have used every ounce of influence which in me lies to convince our city-fathers of the necessity of doing this very thing for our own city, but so far without success. Nevertheless, as Paul Jones said on one notable occasion, "I have just begun to fight."

Reminiscences of Medical Work in China

By H. K. SHUMAKER, M. D., Flat Rock, Ohio

IN 1897, I began to do medical work in south China. There was much to learn ere one could handle the people satisfactorily. First of all came a revision of my ideas as to etiology—to fit Chinese ideas! Ordinarily but four causative factors broughton disease, namely, wind, dampness, heat or cold; and to make one's explanation of a case of sickness satisfactory to these people, one or other of these "causes" had to be mentioned. Occasionally the patient would ignore the rule, as when one, who was asked as to his idea of the cause of a pair of corneal ulcers situated exactly over each pupil, replied, "The devil did it." Many an abscess-patient came with the same etiology and diagnosis—"fung" (wind). When the lancet would let the "wind" out, great would be the astonishment of the patient and his friends.

Chinese ideas as to diet had also to be learned. Foods by them were divided into heating and cooling kinds. The physician who directed a heating food, when they thought the reverse indicated, at once lost prestige. Early in my experience I learned that rice-water was an almost universally used food for the sick, and, so, when in doubt as to what diet to prescribe I gravely directed rice-water.

"How Many Parts Can You Cure?"

A question always asked, "Can you cure?" if answered in the negative, frequently was followed by, "Then how many parts can you cure?" If much relief could be given, the answer was, "Eight parts"; if it appeared that a half cure could be effected, the reply was, "Five parts"; if but little help could be given, "Two parts"; if the case looked hopeless, then "*Mo fat*" (No plan) was the reply.

Most of the native physicians based their charges on the results attained. At the first call a bargain was struck; a certain sum for medicines; so much if he cured four parts, so much for a five-part cure, and so on until a fat fee was agreed upon for a ten-part cure. Ten is the Chinese number of completion.

Neglected cases of eczema were common and victims would often come to natives who had studied with the foreign doctors. The

diagnosis would be leprosy, and fifty dollars would sometimes be collected for a ten-part cure.

A very considerable proportion of our cases were surgical, for the Chinese doctor knew nothing of the art. Everything, from a boil on the head adorned with a tar plaster to an ovarian cyst diagnosed as "wind," would come to our dispensary. Fractures and dislocations were treated without reduction. Plasters were applied and the victim assured that in a short time the pain and swelling would be controlled. If he returned to the native doctor, complaining of deformity or stiffness of the joint, he would be supplied with more plasters. The Chinese can outalcock Alcock on the plaster business. In some places there was an unwritten law that whosoever was cured by a plaster must take the plaster back to the doctor and paste it on the front of his office. I have seen many a doctor's house adorned with hundreds of dirty rags, which either indicated a rushing plaster business or some questionable activity on the doctor's part after honest folk were asleep.

Unique Methods of Diagnosis and Treatment

There is no doubt but that the native doctors had knowledge of some valuable drug treatment, but, unfortunately, this was all held secret by individuals. There was very little that we could learn, and what I did obtain was of no use. This for example.

Hearing that a man had died of *kop shik shui hon*—a disease I had never heard of—I took occasion to call on a learned Chinese acquaintance, who, being under obligations for certain favors, very graciously enlightened me. The diagnosis was difficult, he said, but could be made by a secret method. Take a hard-boiled egg, thrust into it a silver pin, bind the egg over the navel of the sufferer. After a time remove and examine the pin. If it has become black, the disease is present and the man will die unless a certain remedy is quickly used. I asked for the potent life-saving remedy. Answer: The chips from a carpenter-shop, to be boiled in stagnant pond water and this decoction to be taken freely.

Ginseng was the great all-sufficient tonic and aphrodisiac. Never a chronic case fell into our hands but that he had a record of the free use of ginseng. Unless my readers are conversant with certain literature from St. Louis, the use of ginseng has not been called to their attention. There is, however, no lack of evidence that the drug has virtue.

Mercury and arsenic were known to the native physicians, the former as an antisyphilitic, the latter as an escarotic. The arsenical pastes were applied to abscesses, and in due time the pus would flow. The incurving of the eyelids, owing to old tracoma, was often treated with an escharotic paste, to the external parts of the lid. There would be a slough and a scar, which sometimes would draw out the lid and give some relief.

But in the line of animal-therapy our Chinese competitors had us bowing our heads in shamed ignorance, for that time we knew next to nothing of orchitic fluid, crotalin, adrenalin, pituitrin, thyreoidectin, goat-lymph, or horse-serum. All I had to offset their boasts concerning the virtues of dried snakes, toads, lizards, powdered bugs and spiders, and the filings of the bones, horns and teeth of various animals were a few remarks concerning cantharides and blatta orientalis. Here is an incident illustrating the native idea of animal-therapy.

An Englishman was exhibiting a rhinoceros. The people were much impressed with the power of the great animal, and the manager was quietly approached with a generous offer for the animal's urine. To his astonishment he learned that the animal's strength was imparted to the urine and that the fluid was to be used as a tonic. The keeper made an honest effort (so he told me) to collect the urine, but could not succeed, so he sold the Chinese human urine. He boiled it before giving to the men, so that, said he, it would do no harm.

Faith in the Foreign Doctor

The confidence which the Chinese had in the foreign physician was to us remarkable. To them it did not seem inconsistent to follow a man with hoots, jeers and shouts of "kill the foreign devil," and the next day to allow the same "devil" to put one to sleep to reduce a dislocation which had been treated for three months with plasters.

One secret of their confidence was their faith in the idols. A sufferer would go to a temple and in his prayer ask whether he should go to the foreign doctor. He would then throw the divining blocks, and if the answer was "Yes" he would feel assured that the idol had sent him, and no matter what strange method the doctor proposed it would be well.

In an inland city where I resided for several years I once had an unpleasant experience from the overconfidence on the part of the people. Two missionaries had been driven from the city and when the populace had

quieted the job of opening the work was assigned to a doctor. In the midst of much abuse and persecution just stopping short of physical violence, a night-messenger came from a rich man beseeching the honor of my presence in his home. The only son was about to become a father, but the mother was dying and the child had not been born. Could the wise foreigner help? An easy forceps operation presented the despairing father with a son and placed the mother out of danger.

The story of that night's work spread through the city; abuse did not cease, but the sick began to call for help. Among the cases was one of advanced tuberculosis and one of an abscess of the liver. I tried to make clear that no human help could avail in either and ventured to predict how long each one could live. The Chinese were angered and reported that treatment was refused, in the hope on my part that a large sum of money would be raised to fee me. While these things were being discussed the poor patients died at about the time predicted.

Chinese public opinion promptly changed. That the foreign doctor knew how long a man would live became the town talk. Of this I was ignorant, but noticed that when I would give an unfavorable prognosis medicine would be refused and no subsequent call would be sent me. After a time I made inquiry and found that when the doctor said a man's case was hopeless food was withdrawn; for, argued the frugal Chinaman, what is the use in giving a man food who cannot recover. Thus it came about, strangely enough, that with the growth of my mortality list my reputation increased.

Experience in Severe Obstetrical Cases

I had numerous neglected obstetrical cases to handle, and results were remarkably good, both as to mother and child. This in the face of the fact that always the prospective mother had been dieted on ginger and vinegar and had been surrounded with filthy clothing.

One night I was called for obstetric service. The woman was found lying in the prow of a small boat about twelve feet long and four feet wide. The forward part of the boat was covered with a curved mat roof. Creeping on hands and knees, I worked up to within reach of the sufferer. I found a long-neglected occiput-posterior firmly fixed. Crouching between the woman's knees, a vain effort at instrumental delivery was made. Then craniotomy was performed, the child's head crushed, and the woman safely delivered. This was the only occasion on which I backed out after being successful. The fee, thanks.

Sometimes the doctor received more. I was called to a woman living in a miserable shed not fit for a chicken-coop. The midwife assured me that this was the woman's home and that her husband was a night-watchman. She was found to be with twins. A high forceps operation for both children was necessary. Mother and children lived. The fee proffered and accepted was fifty cents. Later I learned that the people had recently moved into a new house and not caring to have it defiled by the death of the woman they had moved her to the shed where I found her. The poverty story was to prevent the foreigner holding them up for a big fee.

"Worms" and Bubonic Plague

During the height of an epidemic of bubonic plague a Chinaman informed me that at last a remedy had been found for the disease. I was eager to be informed, since my mortality was running about sixty percent. This was it: Take of *cham* wood shavings a handful and boil in a quart of water. Moisten a cloth in the water. Expose the patient's breast and rub up and down with the moist cloth. In a short time little black worms will be seen to come out of the skin. These are the cause of the fever, and if one can get them all out the patient will recover. When it is known that the average Chinaman bathes his body with soap not at all, it is clear whence came the "black worms."

Writing of worms, reminds me of a real worm story. Examining a tooth one day, the pained possessor of it asked, "Healer of life, is there a worm in it?" He was assured that there was not, and in a moment more the tooth lay in his hand for his own examination. However, my assistant assured me that worms did grow in teeth—he had seen them! An investigation was in order, and this is what developed.

A certain worm found on the roots of an aquatic plant, when dried, shrinks to the size of a mustard-seed, but when immersed in fluid it quickly takes on its former shape and form. A "wise" practitioner examines a decayed tooth and declares that there "is a worm in it." He bargains to remove it. The gums are manipulated until they bleed and the cavity fills with blood and saliva. Then a probe carrying in a cavity on its tip one of the dried worms is placed in the tooth.

More manipulation is in order while the worm is swelling. At last, with a small forceps, the worm is extracted and triumphantly held before the astonished gaze of the victim. Of course the ache ceases. If it returns, the dentist is ready to find and extract another worm for a satisfactory price.

An Epidemic of Asiatic Cholera

My most trying professional experience was an epidemic of Asiatic cholera. The infection was most virulent. Few lived more than twenty-four hours, many died in three hours. My patients all died. When I read a textbook treatment for this disease, I must wonder whether the authors ever saw a case of the intense type of the disease.

Another sadly interesting side of medical work in China was the large number of attempted suicide-cases in which we were called to save. In a land so overcrowded, where hope was dead to so many, where domestic and social injustice was the rule, and where the belief prevailed that one certain way to even up with an enemy was to die in his home, where one's spirit would ever torment the object of his hate, under such conditions suicide was common and the efforts to save the victim were dictated by frantic fear of his ghost.

Most of our patients chose the opium-route. The vigorous use of permanganate of potassium, atropine, and the stomach-tube saved an encouraging number. One woman elected to end her sad life with a rope. She succeeded. Another woman chose lye. She died on the third day. One Christmas eve a young man quarreled with his father and elected to use a razor to put himself in a position to plague the old gentleman. He laid open his larynx. A chicken was killed. its body split open and laid on the wound, I found him with this strange dressing in place. The outcome was a small scar and a peculiar squeak in the voice.

While I was caring for this poor fellow, an interesting conversation was reported. Neighbors of the man were talking.

"Ah Tsan is better."

"Yes."

"The foreign doctor comes a long way every day to see him."

"Yes."

"He has no money, why does the doctor come?"

"There is no explanation."

"The doctor is crazy."

The noble physicians who are carrying to the sufferers in uncivilized lands the benefits and blessings of medical and surgical skill are not mad but have a part in the greatest work in the world. "And the greatest of these is love."

WHEN a patient is severely ill, treat him as thou wouldest wish to be treated thyself. If thou art called to a consultation, go at once and do not delay. If he ask thee for medicine, give it to him at once and do not ask if he be rich or poor. Use thy heart always to save life and to please all; so will thine own happiness be exalted. In the midst of the darkness of the world be sure there is someone who is protecting thee. When thou art called to an acute illness and thinkest with all thy might of nothing but making money out of the patient, if thy heart be not filled with love of thy neighbor, be sure that in the world there is someone who will punish thee.

—From a Chinese work on Medical Ethics.

WHAT OTHERS ARE DOING

ZENKER'S FIXING SOLUTION

The formula for Zenker's solution, employed for fixing microscopical preparations is as follows: Mercuric chloride, Gm. 5; potassium bichromate, Gm. 2.5; sodium sulphate, Gm. 1; 5 per cent. acetic acid, Cc. 100.

TREATMENT OF RED NOSE

According to Gross (*Med. Klin.*, 1913, p. 979), redness of the nose often may be cured, especially in the case of adolescents, by the internal administration of ichthyol. When this disfiguring condition occurs in anemic young women, the fugutive blushing of the nasal organ can frequently be corrected by the conjoined use of ichthyol and iron lactate, given in pill or capsule form, 1½ grains, of each drug at a dose. The local application of a compress soaked in benzin will cause contraction of the congested capillaries, through the cold produced by evaporation. The blanching effect will sometimes persist for several hours. These applications should not be made near an open light or fire.

THE ACTION OF BILE UPON THE BACILLUS COLI

In *The Journal of Infectious Diseases* for May, E. O. Jordan gives the record of a series of experiments designed to determine to what degree the multiplication of the bacilli coli takes place in bile. With a view to ascertaining the degree of inhibition, a number of pure cultures of various ages and histories were placed in suitable suspension and in parallel series upon plain agar and bile-agar.

He ascertained that freshly isolated strains of this organism as well as those under long cultivation were inhibited by the bile to a noteworthy degree. This growth seems to take place with little regard to the vigor, or lack of it, of these bacilli. The observation showed that bile inhibits at least from one-third to one-half of the vital cells of the bacillus coli, and sometimes a much greater proportion; that freshly isolated cultures are inhibited in the same degree as those under long cultivation and those subject to long sojourn in water; that there is no evidence that bacilli coli that were unable to grow on the bile medium were any more attenuated or less vigorous biologically than their fellows.

Jordan holds these facts to demonstrate that bile is an inhibiting substance for the bacillus coli as for other microorganisms, and that its presence involves the suppression of a certain number of viable cells.

ACTION OF LECITHIN IN POISONING

Lecithin is without toxic effect when administered parenterally (i. e., otherwise than by way of the alimentary tract) to the higher animals, according to E. Hauschmidt, of the pharmacologic institute at Jurjew, Russia (*Biochem. Zeitsch.*, through *Ther. Monatsh.*, 1913, No. 8), and even repeated injections do not cause anaphylactic phenomena.

However, these injections of lecithin exert an undoubted influence upon the action of various powerful poisons, interfering, for instance, with the effects of strychnine, curare, morphine, veronal, chloral, and ethyl-alcohol. On the contrary, the action of ricin is augmented by it, and also that of phosphorus under certain conditions.

DISINFECTION OF SCHOOL ROOMS

In a contribution to *The New York Medical Journal* (Sept. 22, 1913, p. 615), J. T. Ainslie Walker takes occasion to criticize a paper of Dr. Charles V. Chapin on school disinfection read at the school-hygiene congress that recently met in Buffalo. In this paper, Doctor Chapin declared that scarlet-fever, measles, and diphtheria rarely were contracted in the school; that there was no danger of breathing in floating diphtheria germs; and that infection by means of fomites was unlikely.

Walker takes sharp issue with Chapin on these three points, quoting statistics to show the increase of diphtheria, acarlet-fever, and

measles during the school-year and the rapid fall noticeable in the number of cases occurring during the summer vacation. He quotes many authorities to show that garments and dust may be, and are, a frequent means of transmission of disease. As a striking illustration he instanced the experience of Shackleton, who relates how on one of his polar expeditions some articles of clothing were taken from a chest which had not been opened since the start of their expedition three months before, but when this clothing was distributed among six members of the party four of them developed septic sore throats within thirty-six hours.

Walker is firmly of the opinion that great danger inheres in school-life and that it is essential to cleanse the school room properly at frequent intervals; that germ-life should be destroyed by the aid of proper disinfectants, the mere removal of visible dust being insufficient.

DIURNAL VARIATIONS IN URINARY INDICAN

If we examine the urine for indican every two hours from the first morning voiding until bedtime, W. H. King writes in *The Medical Record* (May 24, p. 928), we shall find the indican most plentiful in the morning and then see it gradually decreasing until toward evening, when it may begin to increase again slightly. This variation, irrespective of the specific gravity, show, he thinks, that the absorption of toxins is greater during the night.

This observation may explain the morning malaise, bad breath, bad taste in the mouth, and other sensations experienced by many upon awakening, as well as the morning exhaustion so characteristic in neurasthenic patients. When a patient complains of these symptoms, it is certainly the part of wisdom to secure a careful examination of the urine, as well as to "clean out, clean up, and keep clean."

THE BACILLUS BULGARICUS AS AN INTESTINAL ANTISEPTIC

When intestinal putrefaction is present in the small intestine, says W. H. King (*Med. Rec.*, May 24, p. 928), as evidenced by the sulpho-ethers in the urine being out of all proportion to the condition found in the stools, medication will be found of the greatest benefit; and here the lactic-acid bacilli are of the greatest value.

The Metchnikoff bacillary treatment likewise is of value when the colon is the principal seat of trouble; but benefit is less marked in such instances, although the bowels become more regular and the other symptoms attributable to putrefaction will be relieved to a certain degree.

EYE TROUBLES AND INTESTINAL AUTOINTOXICATION

W. H. King (*Med. Rec.*, May 24, p. 928) tells of a patient who had visited many oculists, both of New York and Berlin, on account of weakness of her eyes, close application of which, for only a few minutes, caused her the greatest distress. The oculists consulted could find nothing materially wrong, for the reason that the weakness arose from a condition apparently more general than local. Nevertheless, the glasses had been changed and the ocular muscles trained by the oculists; but without effect.

Later, Dr. King treated the patient for autointoxication, without any thought, however, of her ocular condition, when, to his surprise, her eye troubles began to improve at once and within five months after discontinuing the systemic treatment she was able to read and sew for long periods without suffering.

APOMORPHINE IN INSOMNIA

According to Dr. Francis Hare (*Brit. Med. Jour.*, Sept. 13, p. 663), apomorphine is an excellent remedy for the insomnia of alcoholism. In acute cases, 1-10 grain is recommended hypodermically, but care must be taken not to induce vomiting. In chronic conditions, 1-40 of a grain, given hypodermically, as a rule produces a short sleep. This observation is worthy of further investigation.

SANDALWOOD OIL IN URINARY INFECTION

According to Jordan as well as Walker (*Brit. Med. Jour.*, Sept. 13, 1913), the bacillus coli grows readily in urine after the ingestion of sandalwood oil. This substance seems to have, however, a somewhat specific action upon the staphylococcus, growth of which is delayed six or seven times the length beyond the normal period when this drug is being taken. For this reason, it is always worth trying in cystitis owing to staphylococcus

infection alone. According to Jordan, it is probable that this remedy may have some selective action upon cocci generally, which would explain its undoubted value in gonococcus infections.

UVA URSI AS A URINARY ANTISEPTIC

Jordan has been experimenting with uva ursi as a urinary antiseptic, employing both an alcoholic extract and the glucoside arbutin. The uva ursi was found to possess a slight but noticeable diuretic action, and putrefaction of the urine was delayed following its use. This antiseptic action was exerted both in alkaline and in acid urines, but was more marked when the reaction was acid. The bacillus coli grew quite readily in acid specimens, but very poorly in alkaline ones. The staphylococcus seems very slightly affected by the drug.

The antiseptic condition following the administration of arbutin, which was given in 20-grain doses three times daily, was only slight, and, so, Doctor Jordan concludes that as an antiseptic the active principle alone is inferior to the whole drug. However, as a diuretic, arbutin, he thinks, is much more valuable than uva ursi itself.

This, in the main, is in accord with our own observations. Arbutin probably is our most valuable diuretic; and it possesses the added and peculiar virtue of adding tone and recuperative power to the urinary mucosa. In this respect, arbutin is unexcelled. In urinary-tract infections, this glucoside should always be given, but generally in association with some more powerful urinary antiseptic.

THE DIET FOR CHOLELITHIASIS SUBJECTS

In a paper read before the International Congress for Physiotherapy, held in Berlin in March, Dr. Salomon (*Muench. Med. Woch.*, Apr. 15, 1913), discussed the proper dietetic regimen in cholelithiasis during the latent stage. His idea is that this prophylactic diet should be the same as in chronic hyperacidity; hence, avoidance of fat-foods of low value [Just what fats are meant the author does not tell us—Ed.] strong spices, coarse kales, uncooked garden-vegetables, coffee, spirits, and all fatty prepared foods. Cold beverages also are warned against.

The author warns strongly against the habitual use of cathartics, although the laxative salines, rationally prescribed, seem to be well borne.

As probably the best preventive of gallstones he considers regulation of intestinal peristalsis, this favoring free flow of the bile. For the latter purpose, he recommends, as is common, a coarse diet of graham-bread, fresh fruit, and boiled garden vegetables. The much-praised grape-cure he puts in this category. Ingestion of albumin may have to be restricted.

EMETINE IN DYSENTERY—MORE TESTIMONY

Speaking of the value of emetine hydrochloride in the treatment of amebic dysentery, the editor of *The American Journal of Surgery* (Mar., 1913, p. 111) says: "Specific therapy has gained another triumph, and emetine will take its place with quinine, salvarsan, and mercury. Indeed, in the promptness and completeness with which it destroys the invading organisms it seems quite to surpass these!"

THE QUININE CURE OF RABIES

The success in treating several diseases of a parasitic nature, notably malaria, sleeping-sickness, and syphilis, by means of internal medication, led Virgil H. Moon to undertake a series of experiments upon dogs to determine the effect of quinine in rabies. This work was done at the Memorial Institute for Infectious Diseases of Chicago, and the results have been published in *The Journal of Infectious Diseases* for July last (p. 165).

Dogs were inoculated with the brain substance from rabid animals and allowed to develop the active symptoms of the disease. When these symptoms were beginning to develop (unusual excitability, restlessness, changed quality of the bark, decreased appetite, difficulty of swallowing, muscular spasms, paralysis of the legs, etc.), the animal was given quinine sulphate in large doses several times daily. In every instance a control-animal was inoculated with the material from the same rabid animal, but it received no quinine.

The drug usually was given in capsules, the daily amount for a 6- or 7-kilogram dog being from 1.0 to 1.6 Grams (15 to 24 grains); this being equivalent to from 12 to 18 Grams (3 to 4 drams) daily for an average man.

Six dogs in all were inoculated. Every one of the control-animals (those which received no quinine) died from rabies. All the three dogs subjected to the quinine treatment survived; two being alive and healthy at the time

of writing, the third dying from an obscure cause two and one-half months after treatment.

While Dr. Moon admits that the number of cases reported is insufficient to warrant too sweeping deductions, and while he does not assume that because quinine is effective in dogs it must be equally so in humans, nevertheless, he is very much encouraged by these results, and expresses the opinion that hereafter we should not regard the medical treatment of developed hydrophobia in human victims as necessarily hopeless. Furthermore, should quinine not prove effective in such patients, other remedies should be given a thorough trial experimentally.

In human subjects the quinine treatment should be instituted as early as possible, and frequently enough to get the full effect. He also suggests resort to sedatives for quieting the nervousness and excitability, as well as spraying of the pharynx with cocaine solution in order to prevent pharyngeal spasm. Curare, he says, has been given hypodermically, in minute doses, to relieve extreme muscular spasm.

Obviously, everything possible should be done to conserve the patient's strength, as exhaustion weakens resistance to any disease. Of course, this method of treatment is not offered as a substitute for the Pasteur treatment, which is purely prophylactic.

UTERINE HEMORRHAGE DUE TO FIBROIDS

The utilization of the Roentgen-rays for treating uterine hemorrhage is recommended, by George F. Pfahler, in *The American Journal of Obstetrics* (May, 1913, p. 862), and this method seems to be especially valuable when the hemorrhage is caused by the presence of fibroids.

Dr. Pfahler quotes the following indications for Roentgen therapy in uterine fibroids, as given by Menge and Eymer: (1) In all older women with myoma in whom there is already a well-advanced anemia, and which may be the cause of an anemic heart. (2) In all elderly and young women with myoma in whom there is marked organic heart disease, diabetes mellitus, chronic nephritis, marked lung disease, and goiter associated with cardiac symptoms.

In general, the older the patient and the more nearly she has approached the menopause, the more prompt and more satisfactory will be the results. With regard to age, the patients over forty show best results. Under forty, roentgenotherapy is not the method of choice.

The type of tumor will influence the result very much. Those of the intramural or interstitial variety give the best results. The subserous, pedunculated and submucous variety do not give good results and should be operated for. In the subserous or submucous varieties, excision might be performed, to be followed by roentgenotherapy, to prevent a recurrence or further development of fibroids.

For inducing complete, permanent amenorrhea, from one to six series of applications will be necessary; and this usually requires from three to six months.

EMETINE HYDROCHLORIDE IN AMEBIC DYSENTERY

Randolph Lyons, of New Orleans, adds the record of another case of amebic dysentery treated with emetine hydrochloride, to the six he already has reported, in an interesting résumé published in *The New Orleans Medical and Surgical Journal* (Oct., 1913, p. 278). Lyons' deductions are very carefully made, and he is anxious to avoid overenthusiasm because of his most favorable results. A synopsis follows:

Of the 7 patients having amebic dysentery treated with emetine hydrochloride, all apparently were cured, except one, who was hopeless from the beginning. The latter suffered from peritonitis upon his admission to the hospital, and the necropsy disclosed gangrene of the large intestine, with three perforations. All but one of the surviving patients have been seen or heard from, and these have remained well after their discharge, the periods being from one to four and one-half months.

The duration of the disease in these 7 cases varied from fifteen days to eighteen months. The stay in the hospital varied from eight days to thirty-nine days. No bad symptoms of any kind were observed from the injections. The largest dose of emetine hydrochloride given was ¾ of a grain, but in two cases, now under treatment, Dr. Lyons says he has administered as much as 2 grains (equivalent to about 180 grains of powdered ipecac) in a day, with no untoward results following.

Lyons' last case occurred in a man thirty-seven years of age. His illness began about a year before, with slight diarrhea and occasional abdominal pain. The disease has progressed gradually for the past six months, the patient has become weaker and paler and lost 25 or 30 pounds. The number of stools has averaged, for the last month, from nine

to ten in twenty-four hours, and these contain bloody mucus, while the passage was accompanied by tenesmus and a dull persistent pain in the lower half of the abdomen.

This patient was given 1-3 grain of emetine hydrochloride morning and evening. The first day the number of stools was reduced from five to two. By the third day there was but one daily stool. Up to this time the patient had received a total of 2 grains of emetine hydrochloride in three days. On the seventh day the patient was allowed to sit up for a few hours, and specimens of the feces obtained with the rectal tube were found free from amebas and blood. He was discharged on the seventeenth day. On the thirty-first day he had gained 15 pounds, the hemoglobin was 90 percent, and the bowels were perfectly normal. Since then he has remained well. In concluding his report, Doctor Lyons says:

"I do not feel justified, from my limited experience with emetine, in making any definite assertions. However, I believe that the drug may prove to be of great value in the treatment of amebic disease. Whether the cures thus far reported will be permanent cannot yet be foretold. Still, it must be borne in mind that relapses often occur because patients are discharged as cured too soon; nevertheless the fault is attributed to the medication.

"Again, many recurrences that are reported among ignorant individuals (especially true in respect to negroes) are due to the fact that the patients return to the same infected localities and conditions whence the disease was derived, and the socalled relapse may not be due to a reinfection from within, but to a fresh infection from without."

BORIC ACID, BENZOIC ACID, AND THE BENZOATES

In his paper upon urinary antiseptics (*Brit. Med. Jour.*, Sept. 13, 1913, p. 648), Anson Jordan asserts that boric acid given by the mouth as a urinary antiseptic has not obtained the recognition which it deserves. His experiments show that whether it is used when there is alkaline urine or an acid one, this drug is efficient in rendering it antiseptic and that its power apparently is practically unaffected by the reaction. In this respect it differs from all other drugs which Jordan has investigated. He believes that boric acid without doubt is the most efficient urinary antiseptic agent *when the urine is alkaline* and must be made acid. It seems to be equally effective against the various different microorganisms.

Benzoic acid and ammonium benzoate are used for rendering the urine antiseptic and also for the purpose of increasing its acidity, for both of which purposes their reputation is higher than that of salicylic acid. Benzoic acid does not cause any higher degree of acidity than does ammonium benzoate, and seems to possess no advantage over the salt. Jordan concludes that the benzoates are second only to acid sodium phosphate. (Walker in the same symposium declares that the benzoates are just as efficient as is acid sodium phosphate.)

As to the antiseptic power of the benzoates, Jordan affirms that alkaline benzoic urine appears to possess no antiseptic power worth speaking of, although, as the acidity increases, there is more or less retardation of putrefaction. The bacillus coli grows very sparingly in highly acid benzoic urines. The staphylococcus, on the contrary, seems quite unaffected by benzoic urine.

GASTRIC DISTENSION AND BLOOD PRESSURE

Experiments with healthy individuals, as also with those having cardiac trouble, performed by Dr. Funder (*Deut. Med. Woch.*, 1913, No. 14), lead to the conclusion that circulatory disturbances after meals are not the result of pressure of the diaphragm upon the heart, but must be of reflex nature. His method was, to produce adequate pressure over the abdomen, and, also, to inflate the stomach artificially; neither of which disturbed breathing, pulse, or blood pressure.

GOITER ARTIFICIALLY PRODUCED BY SUSPECTED WATER

Repeating the experiments of Bircher, which seem to support the geologic-water theory of the cause of bronchocele, Blanel and Reich have kept a large number of rats upon water obtained from two regions where goiters are prevalent, and report (*Deut. Arch. f. Klin. Med.*, No. 1, 1913; through *Muench. Med. Woch.*, No. 16, 1913) that on the whole these confirm Bircher's claims.

While the latter employed water from goitrous regions of Switzerland, the present investigators took their material from Wurmlingen and Heirschau, where between 85 and 90 percent of the children are affected.

The experiments were varied, to exclude and include all possible factors, and the experi-

mental healthy rats were obtained from Berlin, where hyperthyroidism is not a feature, The strumism produced was not as pronounced as that described by Bircher, and the authors frankly admit that, while striking, their work does not remove all objections to the water-theory of goiter origin.

HEXAMETHYLENAMINE TO PREVENT POST-OPERATIVE TYMPANY

In considering the disagreeable and sometimes dangerous tympanites following surgical operation, G. B. La Roque (*Ther. Gaz.*, July 15, 1913, p. 471) some two years ago was struck with the idea that hexamethylenamine might succeed in some way in causing a diminished gas accumulation in the bowel.

In pursuance of this thought, La Roque began to give this remedy for two days previous to the operation, prescribing it in 10-grain doses, dissolved in a glass of water, every two hours between meals while the patient was awake. Prior to the operation the bowels are cleaned out by means of castor oil and enemas. Immediately after operation, the nurse having dissolved 120 grains of hexamethylenamine in a quart of pure water (usually without ice), the remedy is given to the patient in small quantities whenever he complains of thirst. As a rule, he will take and retain at least a quart of this medicated (and tasteless) water, during the first twenty-four hours. Thereafter, 10 grains of hexamethylenamine dissolved in a tumberful of water may be administered every two hours, so that between 60 and 120 grains of the drug is being taken daily for three days after operation.

La Roque has employed this method of treatment in 300 cases, including all kinds of operative work. He concludes that with this method of treatment the postoperative typanites is prevented in practically all cases; in fact out of 300 patients who received this remedy, only 4 had real tympanites, and one of these could not tolerate the drug.

UTERINE HEMORRHAGE AND HIGH BLOOD PRESSURE

In an excellent paper, printed in *The Practitioner* for June, Beckwith Whitehouse states that increased arterial pressure is not an uncommon cause of uterine hemorrhage at the time of the menopause. An increase in vascular tension naturally occurs at the cessation of the menses, and it is not surprising that it sometimes finds an outlet in "flooding" at repeated intervals of two or three months.

This condition can be diagnosed by the type of bleeding by the fact that it frequently is preceded by marked flushes and headaches, and by an estimation of the blood pressure by means of the sphygmomanometer. Treatment obviously is by drugs which reduce arterial tension, such as purgatives, glonoin, and by suitable diet.

A CASE OF ASPIRIN POISONING

"At the present time aspirin is probably more frequently employed than any other medicinal substance," Lindsey and Leckie write in *The British Medical Journal*, for May 24, page 1108. Inasmuch as only a few cases have been recorded in which toxic symptoms have followed its use, the following report of the writers mentioned is of considerable interest:

"The patient was a painter, aged 29, who, when in the Royal Mineral Water Hospital one day, complained of a slight cold, and at 7 p. m. was given 10 grains of aspirin. Just previously he had taken a glass of milk. An hour and a half later he felt a burning pain in his epigastrium, and his right eyelids began to swell. The swelling then quickly spread over the left eyelids, the face, lips, tongue, and pharynx. The roof of his mouth 'felt dry,' his speech became thick, and urticarial blotches appeared over his chest and arms. At the end of three hours from the time of taking the aspirin he could see out of the right eye only with difficulty. There was no dyspnea. He experienced some discomfort from the swelling of the face and presented a very bloated appearance. Next morning, that is, fifteen hours after the administration of the drug, the only sign remaining consisted of some puffiness of the eyelids, which did not entirely disappear until the fourth day."

WHAT IS A DREAM?

A most illuminating theory of dream causation is that presented by Freud, whose remarkable hypothesis relative to the etiology of neurasthenic, hysteric, and borderland mental state has become so popular in this country. As *The Lancet* strikingly says, in its issue of May 10, (p. 1327):

"Freud's theory of dreams is recognized to be the corner-stone of his physchological system; it is the point at which the normal

and abnormal elements in mental life meet. Very briefly, Freud holds that all dreams are doubles; that the dream as related by the subject, however confused and fragmentary it may seem, is only the outward manifestation of elaborate mental processes. What the dreamer is able to narrate is but the 'manifest content' of the dream; it is in reality the exteriorization of a 'latent content,' made up of elements of high personal significance, which can be recovered by the technic of psychoanalysis.

"The elements of the latent content, the true 'dream thoughts' are modified, repressed, distorted, according to laws which, in Freud's opinion, are perfectly definite, and for reasons that can readily be understood. One of his fundamental generalizations is, that *every dream is a wish fulfillment.* Another is, that all dreams are egoistic. A third is, that the wishes repressed in waking life but fulfilled in dream-life are predominantly sexual.

"One of the cardinal features of the theory is the place assigned, and the importance attached to, a 'censor.' Freud assumes that certain mental processes are prevented from reaching consciousness by the activity of a certain psychic resistance, which is almost personified by him and dignified as an 'endopsychic censor.'

"However convenient the terminology, it is not one of the least difficult conceptions of the theory, this elevation of an element of resistance into a quasi personality who sits in judgment on dream-thoughts, whose watchful eye they are forever trying to evade, whose efforts at repression it is apparently their delight to balk."

HEXAMETHYLENAMINE AS A URINARY ANTISEPTIC

In the report of some interesting work upon urinary antiseptics, Anson Jordan (*Brit. Med. Jour.*, Sept. 13, 1913, p. 648) states that the antiseptic power of urotropin (hexamethylenamine) in alkaline or neutral urine is almost negligible, that this power rises rapidly as the acidity increases, and that when the latter reaches about 4 (that is, slightly above the normal) it becomes absolute and the urine remains indefinitely sterile.

This antiseptic power depends, as Jordan's experiments demonstrate, upon the fact that in acid solution hexamethylenamine tends to disintegrate into formaldehyde and ammonium compounds; while in alkaline solution no such disassociation occurs, and, hence, the drug is inert. Formaldehyde is the active antiseptic agent.

The practical conclusion from this investigation is, that, when the urine is alkaline and a urinary antiseptic is indicated, it should be made acid by the use of appropriate remedies, such as the benzoates or acid sodium phosphate.

During the discussion of this subject before the British Medical Association, one speaker made the statement that hexamethylenamine always should be administered in association with remedies designed to acidulate the urine. Two remedies advocated for this purpose by J. W. Thomson Walker are, ammonium benzoate (which may be given in doses of 15 grains thrice daily) and acid sodium phosphate (which may be given in doses of 30 grains three times daily). According to this writer, the dosage of hexamethylenamine often is too small. Usually, in diseases of the bladder in which frequent micturition is a symptom, 5 grains every four hours will suffice, but, when the desired action is not obtained, he gives as high as 15 or 20 grains of the drug three times daily.

Urotropin itself is nontoxic, but it is true that the liberation of a high percentage of formaldehyde in the urine may give rise to irritation of the genitourinary tract. Before giving the larger doses, therefore, the physician should first ascertain by smaller doses whether the patient exhibits any idiosyncrasy toward this drug.

SOME DANGERS FROM QUININE AND UREA HYDROCHLORIDE

According to Samuel T. Earle (*Interstate Med. Jour.*, Feb., 1913, p. 143), there is danger of sloughing following the use of quinine and urea hydrochloride as a local anesthetic when a solution stronger than 3 percent is employed. Nor are weaker solutions free from danger.

Dr. Arthur Hebb, in April, 1912, observed an extensive abscess following the use of a 1-percent solution for the removal of internal hemorrhoids, while a few weeks subsequent to this Dr. Lewis J. Rosenthal, Dr. Earle's assistant, had two cases of sloughing following the use of a 2-percent solution in hemorrhoidal operations. In July of the same year, Dr. Earle had a similar experience in such a case with a solution of the same strength; the wound seemed to do remarkably well, but on the third day the temperature rose to 103 degrees. On the fifth day, there was a distinct slough of considerable size beneath the

mucous membrane and above the external sphincter. After a few days the slough broke down and liquid pus was discharged.

In *The Journal of the American Medical Association* (Sept. 14, 1912), Dr. H. H. Rightor, of Helena, Arkansas, has a report of a similar result following the use of quinine and urea given hypodermically in an operation for circumcision. Here also necrosis was delayed for several days. Dr. Earle's experience shows that quinine and urea hydrochloride, while a valuable local anesthetic, is not free from disadvantages and dangers.

THERE ARE TWO KINDS OF HELENIN

Strangely—and unfortunately—there are two active-principle preparations bearing the name helenin. This fact was brought to light through the publication of an abstract in the last number of CLINICAL MEDICINE (p. 931) concerning helenium autumnale, or sneezeweed. The active principle of this plant is a crystalline substance known as helenin. It has the empirical formula $C_{20}H_{25}O_5$, with a melting-point of 167° to 168° C. Like the drug from which it is derived, it is exceedingly irritant when applied to mucous membranes.

The active principle of elecampane—inula helenium—also is called helenin. This substance is a camphoraceous body, has the empirical formula $C_{15}H_{20}O_2$ and melts at 76° C. The action of helenin from inula is not at all like the helenin from helenium, and it is important these two drugs be not confused.

The sneezeweed principle is not adapted for very general therapeutic use; while the elecampane camphor of the same name is one of the most valuable remedies we have for the treatment of various respiratory ailments.

THE ATROPINE TEST OF THE BRADYCARDIA OF TYPHOID FEVER

As is well known, the effect of atropine upon the pulse has been used as a prognostic sign in cardiac disease. Thus Talley has shown (*American Journal of the Medical Sciences*, October, 1912) that, while in the normal heart the injection of 2 mgm. of atropine into an adult increases the rapidity of the pulse from 30 beats to 40, when there is a serious disease of the organ or if the patient has been recently subjected to an exhausting general disease, the acceleration is much less; in fact, Talley concluded that when the pulse increases 20 beats or less under the influence of atropine the outlook is not very promising.

Roger (*Province Médicale*, May 17, 1913) has applied this test in cases of bradycardia occurring during typhoid fever and similar diseases, and found it of some value in differential diagnosis. In other words, in cases of paratyphoid and a febrile gastric attack simulating typhoid, the pulse was in each case increased 75 to 80 percent, that is, from 50 to 90 in one case and from 60 to 100 in the other. However, in a third case of bradycardia, with a beginning pulse of 48, the nature of the affection being undetermined, where there was a decided elevation of temperature, erythema, and intense headache, the atropine test was negative, the pulse increasing only about 12 beats following the injection of this drug.

In conclusion, Roger says that the bradycardia occurring in typhoid fever and similar diseases usually is dependent upon the nervous system, that is, upon irritation of the pneumogastric nerve or its bulbar center by the typhoid toxin. This he calls the extracardial bradycardia, and in these cases there is obtained the positive atropine reaction, namely, a decided increase in the pulse rate following the injection of this drug.

The intracardial bradycardia, on the contrary, is present when the typhoid toxin attacks all the organs, including the heart-muscle itself. Here the atropine reaction is likely to be negative, and naturally the prognosis is also less favorable; although it should not be assumed that even in this type recovery may not be expected. It is to be remembered, however, that bradycardia may be present prior to the typhoid infection, and also that it may be due to complications, such as icterus, meningitis, or to medication, as for instance with digitalis. Still, the atropine reaction is plainly of value in making prognoses in cases of bradycardia, while being quite harmless.

GASTRIC HYPERACIDITY AND DUODENAL ULCER

Francis W. Palfrey (*Am. Jour. Med. Sciences*, June, 1913) states that what formerly was regarded as simply sour stomach or heartburn, in later years has been shown, in many instances, to be gastric or duodenal ulcer. The patient affected with this form of hyperacidity eats his meals with relish, but a short time afterward he becomes conscious of a burning sensation in his stomach, which gradually increases in severity After

an hour or more these symptoms gradually pass off, only to recur however at the next meal. Generally relief is obtained by the ingestion of an alkali.

Dr. Palfrey states that, while in some patients there actually is present an excess of acid, in others the examination of the test breakfast shows nothing abnormal in the content of the gastric juice, and this symptom he believes may be explained by supposing a lack of balance between the acidity of the stomach and of the duodenum, the former viscus emptying itself (as shown by Cannon) only as fast as the liquid poured into the duodenum from the stomach has been neutralized by the fluids normally encountered. Hence, if we can increase the alkalinity of the contents of the duodenum, and thereby shorten the time required for neutralizing the gastric fluid emptied into it, then the stomach will correspondingly be able to relieve itself more rapidly of its contents. And this result can be brought about, according to Palfrey, by the ingestion of ox-bile, which by stimulating the liver, induces a free flow of the hepatic secretion.

Very striking results have been obtained by this method of treatment in pronounced cases of gastric and duodenal ulcer, while in no typical instance of dyspepsia of a milder type presenting hyperacidity, Dr. Palfrey says, has pyrosis and pain directly connected with eating failed to be relieved.

Dr. Palfrey gives the ox-bile in a salol-coated pill containing 4 grains; however a much more stable and equally efficient and far more definite preparation would be a preparation of the bile-salts, which are now available in elegant pharmaceutical forms.

NEW REMEDIES

Alendrin—carbaminic ester of dichlorisoprophyl-alcohol—has been found an excellent hypnotic (one dose of 1 to 1 1-2 Grams) and sedative in anxiety-neuroses and for all nervous and psychic derangements (1-2 Gram three times daily), even in the presence of great pain and when other remedies had failed.

Cystopurin is a compound of hexamethylentetramine with sodium acetate. In doses of 6 Grams per day, according to G. Krebs (*Zeitschr. f. Urol.*, 1912, p. 654), it acts as an excellent disinfectant of the urine.

Hexal—hexamethylentetramine sulphosalicylate—introduced by Riedel, belongs with the class of urinary disinfectants. In the alkaline intestine, it is split into its component parts, is rapidly absorbed, and eliminated after forty-eight hours. E. R. Frank considers it (*Muench. Med. Woch.*, 1912, No. 52) preferable to the other representatives of this chemical group—helmitol, cystopurin, amphotropin, and mysmalyd. In a series of 80 cases, he has seen no untoward by-effects.

Noviform is a compound of bismuth with tribromphenol, and is claimed to be an improvement upon xeroform; being astringent, antiseptic, antipurulent, penetrant, nonirritant, and nontoxic. Dr. Million (*Muench. Med. Woch.*, 1912, No. 52) considers it an excellent substitute for iodoform. Other surgeons (*Most, Luksch*) also give it praise.

Phenylcinchonic ethyl ester is recommended by A. Stephan (*Apoth. Zeit.*, 1912, No. 27) as a desirable substitute, for certain purposes, of atophan, the plain phenylcinchonic acid. Like the latter, it is an eliminant of uric acid, but this action proceeds more slowly and evenly because of its lower index of solubility. It is without taste.

Melubrin is being tried, with satisfactory results, for acute rheumatism and similar conditions (J. Mueller, *Ther. Monatsh.*, 1913, No. 1). Superiority over salicylates is claimed for it, in that it induces less sudorific activity.

Pellidol (and azodolen, a prepared form) is chemically related to scarlet-red, being the diacetylamidoazotoluol. It is soluble in fats. In the polyclinic for children at Giessen, Germany, it has been extensively tried, according to Dr. Bantlin (*Muench. Med. Woch.*, 1912, No. 52), in eczema of the exudative diathesis, and results frequently were better than with the ordinary remedies. Pellidol, a mixture of pellidol with an iodoalbumin, proved excellent for healing burns, epithaliazation being promoted by it. Pellidol is claimed to be nontoxic.

Mesbé is a preparation derived from sida rhombifolia cubilguitziana, a Central American plant, which is being tried as a new local cure for tuberculous conditions of the nose and throat and other surgical forms. Hermann (*Muench. Med. Woch.*, 1912, No. 50) reports his experience with three cases; but very little as yet is known about this new drug.

Valamin is the valerianic-acid ester of amylene hydrate, and is a new sedative and hypnotic devised at the municipal hospital of Berlin. Stein (*Med Klin.*, 1913, No. 9) recommends it very hihgly giving from 8 to 12 grains for inducing sleep, and in 4-grain doses as a sedative.

MISCELLANEOUS ARTICLES

Colchicine: The Single Barreler In Acute Articular Rheumatism

IN ACUTE articular rheumatism, I rely solely upon colchicine to control the acute, very intensive variety of this painful condition at all ages and in either sex. During the past eighteen years, colchicine has not failed to do the work. Some time in March of 1894 I began to pin faith upon the single remedies and to study their effects on properly selected ailments, also how best to administer them with respect to the symptoms of disease as well as the quickest way of relieving and curing a given complaint.

Inflammation located in one or several articulations and rheumatic in nature is one of the diseases which often absolutely overwhelm a patient. Among remedies having the power of quick elimination in acute articular rheumatism, colchicine, in my hands, has proven to possess it in a superlative degree.

Many patients come to me complaining of but one point, sometimes two, of invasion—the shoulder or elbow-joints, or both. The wrists and ankles are usual sites at the beginning. The pains are moderately severe, and usually home treatment is first tried. One, two, six weeks elapse often before failure or but partial relief determines the sufferer to seek aid from a physician. Many members of a community hold down an acute invasion by resort to some form of drug to free the bowels. This fact explains the slight and sometimes considerable improvement. There comes a time when autotoxemia gets in a big charge, then follows the explosion. Colchicine acts equally well in any and all stages.

I will cite only a few cases to prove the efficiency of colchicine, but not less than two hundred have been treated successfully by me during these eighteen or more years with this single remedy; hence, my faith.

The case of a two-jointer—ankles. Was called in the latter part of March, 1894. He was a heavy-set German of 45 and a reliable patron of a corner saloon. His occupation necessitated working in slush ice in the winter season. I had treated him several times previously, by using 3- to 5-grain doses of salicylic acid (pure crystal from oil) given in capsules, preceded or followed by intestinal flushings and antiseptics. Slow relief, but no cure.

This time Henry V. crippled in and said, "Doctor, my two ankles are loaded with sharp needles, every step breaks off a dozen. The pain is terrible."

I prepared a vial of 50 colchicine granules, 1-128 grain each, directing him to take one every fifteen minutes until four or six were taken, then every two hours as long as there were "needles" to cause pain.

"Well," said Henry, "I must have something for the strong pain."

"Sure, Henry, follow directions and the 'needles' will soften up and your pain will cease." Henry looked solemn and very incredulous at the little yellow granules, then hobbled out.

Several days later I met Henry hurrying along with a quick, vigorous step. "I am cured, doctor, but I nearly killed myself before I got next."

"How?"

"It was like this: Them 'ere little yellow seed looked so small I thought if one was good more would cure quicker, so I took several at a dose. After the fourth the pain got in my belly and I quickstepped for two hours in one spot. This gave me time to read the directions, and I made up my mind to take just one every two hours. When I got up the pain was not much—but I was hungry."

Henry had a few of those granules (colchicine) left, but he said that no amount of money could buy them. Several years have passed since then, but there has been no return of his rheumatism.

The rheumatics of childhood and youth

yield alike to colchicine. The younger life exhibits more sensitive features. Febrile and stomach symptoms must be met with aconitine, and sometimes with veratrine.

Cerium oxalate usually controls emesis, even when induced by crowding doses of colchicine; also, often the pain is so acute that to modify it requires gelseminine or hyoscyamine, or both, added to the solution made of colchicine. But few cases hold out over twelve to twenty-four hours under the rapid-fire single-barreler. When pain does lag, there is seldom need of repeating analgesics.

Visiting a family some distance in the country, the patient's sister, a woman of 25, married, always vigorous, mother of several healthy children, had complained for two months of soreness, stiffness and at times slight redness and swelling of both wrists. No skill was required to charge articular rheumatism as being the cause of her trouble. I had by me only 26 colchicine granules, 1-128 grain each, and I gave her these with the usual instructions. This absolutely cured her, to stay cured. I say "stay cured" because after three years she has enjoyed absolute freedom from the least manifestation of a single symptom, and the carrying in the meantime a big healthy boy to easy, successful delivery did not reawaken the rheumatism.

In the fall of 1912 I visited a lady 46 years of age, the wife of a soil-tiller, who was unable to move a single joint except in the cervical region, retaining ability to move her head. Temperature, 104° F.; history of constipation (they all have this); attack forty-eight hours old. A solution was made of colchicine, 1-128 grain; hyoscyamine, 1-250 grain; and gelseminine, 1-250 grain. The fever was soon controlled by another solution of aconitine and veratrine.

This visit was made late in the afternoon. By daylight the following morning the fever, pain, and joint features were banished. Patient being 20 miles out, she was seen but the one time. One hundred and twenty-eight doses of colchicine cured all acute trouble; sodoxylin put on the polish and finish; nuclein solution put the phagocytes on top and the opsonic index to normal.

Saw a farmer one cool forenoon in April, 1911. He was at the age of 38. The stertorous way oxygen was pulled in, the pallor, haggard face, the half-open eyes, sort of chilled me as I stepped in upon this picture. Seemed the undertaker's visit a better guess. One big toe, jaw, and head were the extent of his ability to exercise. Rousing him from stupor, some questions put told me more of the situation.

His former physician had controlled the pain with morphine, hence his apparent last sleep when I came into his room. He had made his will, arranged his business two days previously, and was anxiously waiting to be ushered into "His presence." I soon had my rifle leveled and was firing straight at Old Rheumatism.

Next morning my "dead man" was occupying a big rocker-chair with a hole in the center. He was cheerful, able to joke, nearly able to walk, no pain; but the aroma from beneath that rocker was terrific. In a week he came to town in a lumber-wagon, revoked his will, and in two weeks more he was attending to business on the farm.

During the winter of 1879 a rushing practice exposed me so much and so long that I came down myself with a cracker-jack dose of acute articular rheumatism. Home at midnight suffering fierce pain in left knee-joint. Took 10 grains of quinine in capsules. Tried to get into my buggy to go to a sick child in the country. Threw up the quinine before I could get started. There was ice on the buggy-step, team was wild—so was I with my knee—foot slipped as I attempted to get in. My knee struck the step—gee whiz! but I went up with pain. Went to bed—now.

Next morning called a doctor. Left powders. Recognized when first dose came. Sent for drug-clerk. Dictated 8-ounce mixture of sodium salicylate, 20-grain doses. By the time I received it no joints worked. Contents of bottle at three doses, with the Dover's, put a hitch on me and the pain, and I slept. Six weeks in bed and six months getting well gave me lots of time to consider the inroads of rheumatism. I took a trifle less than a barrel of different decoctions. Could scarcely retain any medicine any length of time—threw it up. I took salicin the last two months, in 10-grain doses, which appeared to obtund gradually joint lameness.

I always figured wine of colchicum should produce much relief. It was late in my siege before I thought of it. Then my stomach rebelled.

Not until the Abbott age did we get colchicine in shape to do Old Rheumatism up. The active-principle therapeutics in all probability is of Belgian birth, but it required an American to put the greatest discovery of the age to the front—so why not say, "The Abbott Age of Clinical Therapeutics in America."

In scattering these lines on the positive effect of colchicine in acute rheumatism, I have made no attempt to group symptoms or to delve into the etiology or pathology. Rheumatism, as a disease, in any and all its phases is too much written of and about to require additional telling. The acute variety I treat solely and successfully with colchicine, and that settles it, so long as it works in future as in the past eighteen years.

J. D. JUSTICE.

Hunter, Okla.

[The old war-horses, like Justice, surely do know the ins and outs of these troublesome diseases. The Doctor has been an earnest student of drug-action for many years and can always give "pointers" worthy the attention of any man. Colchicine is assuredly a most valuable remedy. It should be used more in rheumatic and gouty states.—ED.]

ABOUT THAT MELANODERMA IN A YOUNG GIRL

In the November number of CLINICAL MEDICINE, among the queries (page 965), we reported a most interesting case of melanoderma. It will be recalled that the patient in question is a child of 10 who since infancy has been growing darker and darker, until now the entire surface of her body is as deeply pigmented as that of the negro. Since quite evidently there is present some marked abnormality of some of the ductless glands, we referred the case-reports, together with some photographs of the child, to Dr. Charles E. de M. Sajous, of Philadelphia, author of the great work on "The Internal Secretions," and requested his opinion. His letter in reply is quoted herewith:

"Your favor of the 8th inst. came just as I was leaving for Ottawa, Canada, to attend a consultation; hence the slight delay in answering it.

"The case of melanoderma described in the slip received is a very interesting one. I should like to explain it with the aid of somebody else's views, but can not, and, so, am obliged to refer you to my own labors.

"You will find in the second volume of 'Internal Secretions' (page 835) an explanation of melanoderma, as based upon many experimental facts.

"You will remember that I consider the albuminous constituent of hemoglobin as the product of the adrenal glands. It is, therefore, carried to all parts of the body. You will recall, also, that the adrenal secretion controls, in connection with sympathetic system, the caliber of the arterioles. These facts suggest the solution of the enigma, the explanation of which seems to me to be as follows:

"Either as a result of inadequate development, or of some acute disease that caused grave lesions of the adrenal glands—which, therefore, now would be partly sclerotic—the child since that age has not secreted

A case of melanoderma: the pigmentation of skin of course does not show clearly in the picture

enough adrenal secretion. As the latter (from my viewpoint) takes part in the respiratory process and general oxidation and sustains cardiac dynamism, the general symptoms observed, including dyspnea, muscular asthenia (lassitude), and valvular inadequacy are explained.

"The adrenal secretion being deficient, the cutaneous arterioles are dilated and inadequately propel the adrenalin-laden (hemoglobin) blood through the capillaries. The adrenal constituent of the blood accumulating in the peripheral tissues by virtue of the torpor of the circulation, and, being the substance that assumes the brownish-black color

upon exposure to light, the child's hands and arms are the regions most discolored.

"The exophthalmos is the result of the abnormal dilatation of the postocular veins, owing to the abnormal quantity of blood admitted by the dilated arterioles.

"The case is not one of true Addison's disease, in that the adrenal glands are not the seat of a progressive lesion, but rather is a marked instance of the condition I have termed 'functional hypoadrenia.' Still, the treatment which I advocate for Addison's disease if continued sufficiently long and carried out with due care, would do the child

Face of patient with melanoderma. Note the distinct exophthalmos

considerable good. Hoping this may be of some service to your correspondent, I am, sincerely yours,

C. E. DE M. SAJOUS."

Philadelphia, Pa.

[The treatment advised by Dr. Sajous, given in a very few words, consists in the administration of adrenal extract or adrenalin to supply the blood with the adrenal principle which it lacks. Also, since toxic wastes are inadequately katabolized, in the treatment of Addison's disease he advocates giving physiologic salt solution intravenously three times a week. In the little girl's case this would perhaps not be desirable. Remedies which are contraindicated are thyroid, arsenic and alcohol.

We hope to be kept informed of the future progress of this case.—ED.]

DOCTOR ROBERTS' INCOME: A COMMENT

I cannot but comment upon Dr. George Roberts' (Lincoln, Va.) letter in a recent issue of CLINICAL MEDICINE, thinking he has told only half of the story. As it reads, one is to believe that from no other source but $340.92 per annum he raised and educated eight children.

Upon the face of it this seems impossible. He must have had some other sources of income from farm or garden—or his family "worked out." To say nothing about the cost of medicines, books, keeping of road-outfit, etc., bare food and raiment for ten people could not be provided for the pittance he mentions.

I can claim to be economical, but it bothers me to live and keep even on $1200.

A. S. T.

——, Ontario.

[The doctor did not submit this letter for publication, hence we do not print his name. However, it may encourage others to write us concerning the doctor's income. We shall appreciate it if many will tell us their own experiences. If preferred their names will be withheld. To cure an evil we must first understand it. We are sincerely anxious to contribute all we can to the relief of the financial distress from which so many of our craft plainly suffer.—ED.]

DOCTOR ROBERTS' EXPERIENCE, AND MY OWN

Dr. George Roberts, of Lincoln, Virginia, undoubtedly is one of nature's heroes. To say the least, he certainly is an able financier, and had he a larger field for manipulation he no doubt would have rivaled some of Wall Street's best men. I say this with all respect and sincerity, as he has done wonders on his small income.

I am a native Kentuckian and practiced in that state for some time, and I imagine conditions are similar in parts of Kentucky to those in Virginia. My own experience there may be worth something. My results, not so good.

After doing fairly well, my first two years in practice in a city, the panic came on, making it necessary for me to move to the country. I landed in a small crossroads place in the tobacco-section of middle Kentucky, on Green River, 15 miles from a railroad.

Did I get any practice? Well, I guess I did, and from morn till night, and often all night, did I ride horseback, as the roads were simply trails over the steep hills, and this was the only safe mode of travel. The natives, who were of a very low grade of intelligence, mostly made a living from small clearings planted to corn and tobacco. A few were considered wealthy, because they had managed to build two- or three-room houses instead of the regular one-room log cabin, without window in most instances.

Living within this indicated distance from a railroad and good, intelligent people, I saw more ignorance and superstition than I knew existed. Experiences were the chief remuneration I received, as the cash was not plentiful for a doctor. My income averaged 45 dollars per month; my living, horse care, medicines, journals, insurance, and so on, used all of it. This was too slow for me and I was looking for something to do besides charity work; so I pulled out after just four months. In order to get away without going into debt, I was compelled to sell out a good office-equipment and all household furniture. Then out to dear old Montana my good wife and I came, and here I made a fair success of it.

I remember that, while I was in college, several locations were offered the class, many of them good locations; but on investigation they proved to be places with plenty of practice, but a man had to make his living at farming. Now, I did not go to medical college to learn to farm, and I would not stay with any location where I could not earn from $2000 to $5000 per year. And I manage to use all of that; yet I am not extravagant.

My first year in Montana, in a purchased practice in small town, netted me over $3000, the next two years from this to $4500 per year, and when I sold out I had collected all but $75.00, and half of that I have received since. How, you say? Statements sent at regular periods when I knew the ranchers had money from the sale of cattle or wool or grain. The tardy ones I spoke nicely to when I met them and secured their verbal promises, to which I saw that they lived up. I never hesitate to speak to any of my clientele about an overdue bill in a friendly manner, and I generally have as hard a tale to tell them as they have me. Of course, they tell me theirs first.

I try to keep optimistic with them, and when I know any are down and out I give plenty of time; and they generally pay out. By this method I have collected from people and made good clients out of people that beat every other doctor who had worked for them. In seven years of practice I have asked for but one personal note, and have asked for but one judgment against any client.

Of course, from all of this, don't think that I do not have to wait, as more bills go six months rather than one.

Since locating here in Bozeman I have been compelled to cut fees down to what one other man was charging. He dispenses, as I also do. His business amounted to more, perhaps, than that of the rest of the doctors: in fact, more than he can do at times, and I have found a very desirable new business here in addition to holding my work from Salesville, which is only a short distance away.

Straight business sense, as I see it. Some of the other "goose-step" office-chair warmers are criticizing me for my fees, claiming that it is not fair to them. I am looking out for myself and family, and whenever I have not sense enough to make a respectable living out of the practice of medicine in some honest manner I shall quit and take a job, as I always have had to hustle and would not be content just to keep my office-chair warm, even had I plenty of surplus cash, which I have not. I must be busy or I shall go where I will be..

If conditions don't suit a doctor and he cannot make more out of his practice, I think he should go to a larger field. There he may be compelled to adjust his ideas somewhat, to get the business; and that he should do, as the average practitioner is jealous of the other one. It is natural and beneficial; then, why should not this same jealousy stimulate a man to try all the harder to get business that the other fellow gets, if it is by fair methods?

In some sections of the United States, the fees are too low and in others too high (not for the hard-working doctor), but for the struggling newcomers, as in some sections of this state. I try to be as reasonable as the other doctors in my community, and I have never failed to get the business, though at times things look blue to me as well as to others.

F. E. McCann.

Bozeman, Mont.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION

The Mississippi Valley Medical Association met this year at New Orleans on October 23, 24 and 25. We hear reports of an excellent meeting with a fairly good attendance. Dr. D'Orsay Hecht, of Chicago, was elected president for the ensuing year, and the next meeting of the Association will be held at Cincinnati.

TWO CASES OF PUERPERAL ECLAMPSIA: ONE AFTER, THE OTHER BOTH BEFORE AND AFTER LABOR

On April 8, 1913, about 10 p. m., I was called to attend Mrs. J. in her fifth confinement. Found her "grunting" some. Was large and ruddy, weighing about 175 pounds. All her labors had been normal, but all the children died at four or five weeks of age, save one. I found the membranes pouching nicely, os fully dilated. After rupture of the membranes the patient had only one expulsive pain, and the little man came humpin'. In three or four minutes she informed me that the afterbirth had passed. There was very little hemorrhage. As is my invariable rule, I examined the secundines thoroughly and found everything complete.

After the patient's toilet was complete, I spent a couple of hours in getting acquainted with the family, as it was my first visit. About 1 a. m., after collecting my fee, I headed for home, leaving the patient in apparently good condition. Had just gotten in bed and stretched out, when the 'phone rang. When I answered, the party told me to hurry back out to Mr. J's (about four miles), as my patient was having a spasm.

Well! I hustled into my clothes, hooked up Jo-Jo and "went some." Found patient laughing and talking, pulse normal, no temperature, no pain, no spots—no anything pointing to trouble. However, I gave her 20 minims of Norwood's tincture hypodermically, and about 10 grains of calomel. She had no further trouble, and I stayed until after breakfast.

I reached home about 8 a. m. and prepared to shave. Just as I had my face covered with lather the 'phone jangled and my wife answered. I heard her say, "Is that so?" She informed me that those people wanted me again, as the woman was having more spasms.

When I reached the house I found the patient in convulsions. I gave 20 minims more of veratrum by needle, 3 minims of croton oil in olive oil on tongue, placed the patient in a hot-pack for two hours. She was certainly sweated and purged thoroughly. Her pulse was below 50 per minute, but still the convulsions persisted, growing more frequent, the patient turning a greenish-yellow hue; was comatose, tossing head from side to side. Used chloroform to try to ward the convulsions off, but suddenly she would be in the midst of one.

About 3 p. m. I called for help. Dr. C. responded, and we decided to bleed her good. Extracted about three pints of very dark, thick blood. In about ten hours, or midnight, she roused up, having had no more spasms after bleeding. By 7 a. m. she was rational, and thereafter made a fine recovery. Baby doing finely.

On the morning of May 6, 1913, I was called to attend Emma B., mulatto, 28 years old, weighing about 150 pounds. Husband and one old negro woman told me the patient had been having spells. I could not arouse her till I attempted to make a vaginal examination, when she cut up considerably. I found no dilatation whatever. Gave her 1-2 grain morphine and 1-120 atropine, and told the husband to call me if she had another spell.

About 3 p. m. he called me. I carried Dr. H. to assist me. When we reached the house we found her grunting and pressing the hands to her head. I told the doctor she was having pains. (I will here state that she lacked one month from term, as near as I could find out.) Dr. H. examined her, and found the os fully dilated and the membranes protruding. I asked him to anesthetize her while I prepared my forceps for possible use. She became quiet, when I delivered her of a living baby and at once secured the placenta and membranes. When we left, I informed her husband that she would probably not have any further convulsions, telling him I should return the following morning.

Next morning upon my arrival I found her as crazy as the proverbial bedbug. I am some cusser myself if occasion demands, but her vocabulary of cusswords capped anything I ever heard. She cursed me and everything and everybody, husband included. They told me she had been having "spells" all night, and that they had kept her strapped to the bed. I had carried a medical student with me; so, I chloroformed her at once, then surrendered the mask to the student. I opened the right median cephalic vein and

extracted about two quarts. She roused up, made a nice recovery, and had no trouble, save a chewed tongue.

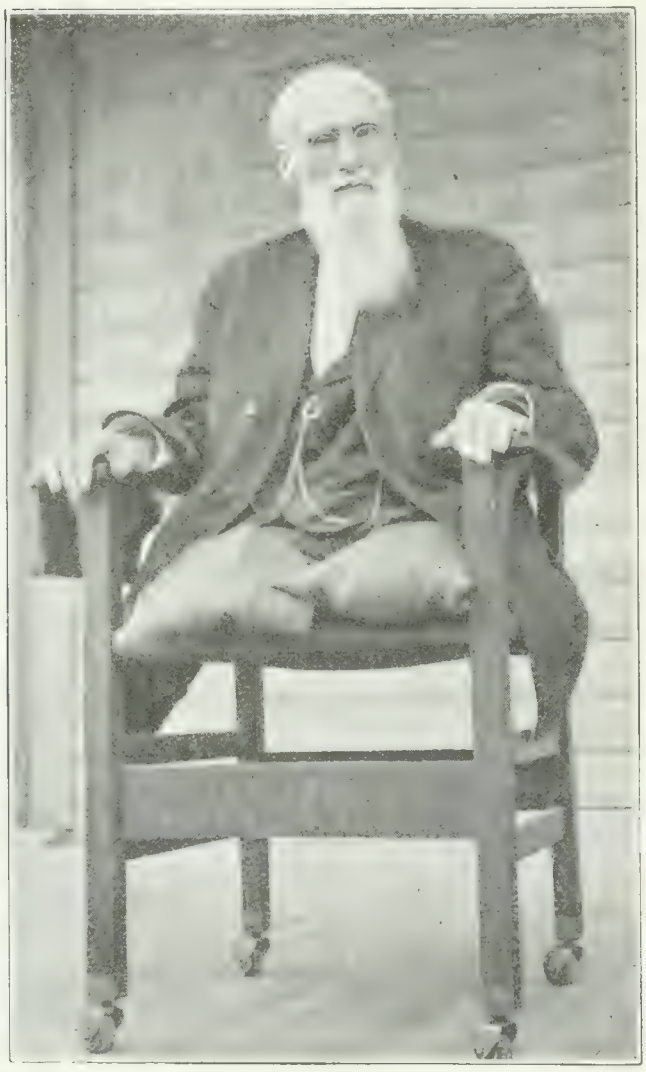
These cases may not be of much interest to the "family," but to the man at the bat they mean something.

R. E. FOSTER.

Carrollton, Ga.

LOOK AT THIS PICTURE

We all admire a man who has grit. That's why I want you to take a good look at the picture of Dr. H. L. Smith, of Geneva, Nebraska, printed on this page. Dr. Smith is more than 84 years old. He has had cataract, and for a long time was practically blind. The lenses of both eyes were removed some months ago, and now he can see to read and write again.



Dr. H. L. Smith

For about thirty years Dr. Smith has suffered from diabetes mellitus. The outcome was senile gangrene of a lower extremity compelling amputation of the right leg at the lower third of the thigh, and later of the left leg at about the same place. Both of these legs were taken off after he was 80 years old—remarkable in the case of any diabetic; especially remarkable in a man of such advanced age.

Now he has a chronic bowel trouble requiring constant care and personal attendance. But in spite of it all Dr. Smith is cheerful and hopeful, and as full of grit as ever. Fortunately he has laid aside something for a rainy day, and can "pay as he goes." Take a good look at his face.

RINGWORM—CURED BY IMPATIENS FULVA

Some thirty-four years ago, when I was a boy of about 9 years, I was troubled with "ringworm," just above and on the inner side of my knee, and about the size of a silver dollar. It annoyed me very much, so much, in fact, that I can still see that "ring" with my mind's eye. Speaking of it to an old man in the neighborhood, a socalled herb-doctor, he told me to get some of the wild touch-me-not growing along the edge of a marsh near by, then to squeeze the juice out of the stems and rub that on the ringworm three or four different times. This, he promised, would cure me. I did so and was cured by two or three applications on so many days.

I never forgot this episode, and, so, when I began to practice medicine in 1894, and ever since then, I have resorted to this remedy, on all occasions offering giving it a fair tryout; and it has worked like a charm in every case—in some where ointments, lotions, and other tried remedies had failed. The application is a simple matter, and it does not stain the skin. Now I am anxious to learn whether others have tried this drug.

As I did not know the correct name of the weed, I sent a sample to Doctor Abbott, who in turn referred it to Prof. W. B. Day, of the University of Illinois School of Pharmacy. Professor Day very kindly has informed me that the weed is known as wild balsam, June-weed, or wild touch-me-not, the botanic name of the plant being impatiens fulva. It belongs to the family geraniaceae and is related to the common nasturtium and the garden balsam.

I. L. TURMAN.

Cynthiana, Ind.

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[By referring to the Dispensatory, we learn that the impatiens fulva has numerous synonyms among native Americans, including wild celandine (the more proper), wild

balsam, jewel-weed, silver-weed, spotted touch-me-not, snap-weed, slipper-weed, wild ladies' slipper, and still others. A European variety is known as impatiens noli-me-tangere. The "snap"-balsam of the gardens —impatiens balsamina, native in India—is a close relative, and the much smaller delicate, pretty blossoms of the impatiens fulva have the same orange color, but are sprinkled with brown dots. The writer has encountered them to the west of Chicago growing in the edges of woods bordering streams. Their botanical description is found in the Dispensatory. The juice of this succulent plant enjoys a certain reputation among Eclectics and Homeopaths as allaying cutaneous irritation, for instance in rhus poisoning. No active constituent has been determined in it, and pharmacologists doubt its possessing specific virtues, save, perhaps, for the presence of tannin, which makes them astringent. Dr. Turman's communication is of interest, and we hope other physicians who possibly may have had experience with the plant—for any purpose—will tell us about it.—Ed.]

ICTERUS. "WAUGH'S DISEASE." ASTHMA

Permit me to submit to the brethren a few notes and comments on the above-named subjects.

Icterus has given me several severe jolts—not personally, but professionally—during the forty-odd years I have been a practitioner of medicine.

Many years before I studied medicine I learned from an old woman that there were two kinds of jaundice—"yellow janders" and "black janders." At college I was taught that there was idiopathic jaundice, obstructive jaundice, and essential (or malignant) jaundice, the latter represented by that most fatal of all forms of jaundice, acute yellow atrophy of the liver. Later I was taught by the books that when the liver was the seat of the trouble it should be called hepatogenous jaundice, and when the blood was the source of the trouble, hematogenous. Later still, the distinctions cholelithiasis and angiocholitis came into use.

None of these terms, however, convey in their meaning a full definition of the etiology and pathology of jaundice in all of its forms.

The simplest classification I know of is that of *obstructive* and *hemoglobinic* jaundice. In the former, anything that partially or completely closes the ductus communis choledochus or the cystic-duct, or both, will cause the bile to be absorbed by the lymphatics and disappear from the intestines and stools and instead appear in the urine, skin, and conjunctivæ. In the other variety, any agent introduced into the blood that will destroy the red blood-corpuscles will manufacture bile-elements that will appear in the same organs and secretion as in the obstructive variety.

In regard to acute yellow atrophy, it seems to me the blood becomes so filled with hemoglobin that the liver simply is clogged by the debris and the patient dies. I have seen but one case of this disease and that not quite typical. But, judging from the reports of others, it must be a terror.

Of the obstructive variety, I have had three in my own practice and one in that of a friend. Three of these were obstructed by cancer of the head of the pancreas (two of them confirmed by a postmortem), and one by a gallstone in the common duct (also confirmed by a postmortem). All these cases were jaundiced for many months, and those who died of cancer did not suffer much severe pain, but the one who died from the one gallstone impacted in the duct near the outlet suffered untold agonies.

This last-named patient had many attacks and was treated by more than a dozen physicians. When I first saw her I diagnosed gallstones and advised an operation, but it was refused. A year after, she sent for me to consult with another physician and then she wanted me to operate. But she was so near death that I was compelled to decline to operate, and she died a few days afterward. I made the postmortem examination and found the duct closed by a large gallstone impacted as above stated. Only one of the many physicians who saw this case diagnosed gallstone. That was twenty years ago. I am sure more doctors of the present year would do better. Gallstones were not then thought to be removable by operation, except so by a few supposed cranks.

I need not enumerate here the various causes of obstruction of the bile-duct that will produce jaundice just as surely as would a ligature around the ductus communis choledochus. But the form of jaundice found without any obstruction in the duct seems to be so complex in the manner of its production that its exact cause has not as yet been discovered.

There are several substances that will destroy the red blood-corpuscles to such an extent as to produce bile-products or near bile-products in the blood in sufficient quantities

to give rise to jaundice of a very malignant type. Here is a field for extensive investigation by some of our enthusiastic young pathological chemists.

Catarrhal jaundice is the mildest of the obstructive forms of the disease. It generally runs a short course and the patient fully recovers in a few weeks. Good treatment will hasten recovery and prevent complications. Broken doses of calomel and a laxative saline to clean up the bowels; then phosphate of sodium and chionanthin will soon remove the swelling of the ducts and start the bile flowing into the bowel. A little nux vomica and hydrastis will soon bring the appetite up to a healthy state.

The obstruction caused by gallstones should be discovered before much organic change is produced in the liver, and if medicine fails surgery should be employed.

The medicinal treatment of gallstones often is successful before the calculi get too large or too numerous to close the duct. The possibility of dissolving the stones is very doubtful, but cholagogs may drive small ones into the bowel and thus relieve the obstruction. I have seen several cases where the stones were washed out of the stools after severe gallstone-colic had suddenly ceased. Phosphate of sodium, succinate of sodium, chionanthus, and chloride of ammonium are useful in these cases and have given me good results in a number of patients.

But what shall I say of the cancer cases of obstructive jaundice? One may try many remedies before a diagnosis is made. After one has concluded that the patient has cancer of the pancreas, liver or gall-bladder, there is little to do but to produce euphoria as completely as is possible as the patient nears the inevitable end.

"Waugh's disease." Doctor Waugh tells us of his experience as a wood-chopper and gardener, in the September number of CLINICAL MEDICINE, and because he and his forebears had not been accustomed to heavier utensils than pens and scalpels the trauma that was produced by the ax and spade in his hands, he thought, was a new disease; which of course it was to him personally. But to us fellows who were brought up on a farm or in the lumber woods, this traumatic neuritis is a very old affliction; many a young fellow has contracted it severely by overhaste to immunize his hands to chopping after many months of idleness.

Many a case have I treated of such neuritis, often combined with thecitis of some of the flexor or extensor tendons of the hand and wrist. I have found hot epsom-salt solution, kept on for twelve or twenty-four hours, generally cures such cases, but does not immunize the patient. If Doctor Waugh had started when a boy to render immune his hands to the use of the ax-helve as well as a pen, he surely would have developed an immunity to neuritis from wood chopping to a very large extent.

Asthma: Now a word on personal experience with this great affliction. I have suffered from bronchial asthma for about half the time during twenty-seven years, and nothing ever stopped the cough entirely, except change of climate, and that would last not more than a few years before the attacks would return. Last April I was attending a case of confinement and was up most of the night. After I got through with the case I was somewhat exhausted and a spell of asthma came on more severe than for many weeks past.

I got the nurse to give me half a dram of subculoyd lobelia hypodermically, and that dose acted like magic. In an hour I was sleeping sweetly, and from that time on till now I have not had a severe attack. The cough has left me and I have gained weight, several pounds, and have not smoked an asthma-powder more than a dozen times since April. Before that, for ten years I had to inhale the smoke from two to ten times a day. Now I sleep all night.

I am 72 years old and am still attending to a general practice. I have great faith in subculoyd lobelia. I have used it in only a few cases, but it fills the bill.

THOS. W. MUSGROVE.

Sultan, Wash.

TOXIC INFECTIONS AND SUPPURATIVE MYOSITIS

My reason for writing at this late date this article upon the conditions named in the title is, that I have yet to see anything written upon the subject in any journal in this country.

I reported the first case that I saw in the year 1905. It was published in *The St. Louis Weekly Review*. Quite a correspondence was kept up between Dr. Millican, editor of *The Review*, and myself. I was contending at that time that it was "polymyositis." At any rate, the report of the case was published and is referred to in volume vi of "Modern Medicine."

A pen-description from myself of a severe case of this kind can not give a just idea

of how bad it is. So I will describe my first case as I saw it.

In October, 1904, I was called to see a man 24 years of age who, until the present illness, had been strong and healthy, weighing 175 to 180 pounds. He was night-watchman at a planing mill. Fourteen days prior to my visit, while on duty, he was taken with a severe rigor. He went home and called a physician, who gave a hypodermic injection of morphine, to allay the pain. The patient growing worse, the doctor called again, and he found that the right leg from the toes to the body was swollen enormously, but not red.

Monday, 9 a. m.: The swelling had begun the night before in the left groin, and passed down to the toes, as in the night. By Monday night the swelling had gone up to the axilla on the left. A high fever was present all this time—104° to 105° F., pulse 130 to 140, respiration 30 to 32. Tuesday morning the entire left arm and hand were swollen intensely. By Wednesday the neck, right shoulder and arm were all in the same condition. Tongue red and very dry; sick at the stomach; bowels costive; kidneys not acting much. This is what I learned from one of the physicians who had treated the man.

I found the patient still swollen and so sore all over that he could not be turned over by anyone, but he could turn himself by getting on his knees and elbows and, with his face to the bed, turn. To make it worse than ever, a few days before I was sent for he had almost completely lost his eyesight The pupils were dilated and barely reacted to light. The muscles of his jaws were swollen so much that he could not protrude his tongue enough for me to see it. I found: temperature 102° F., respiration 41, pulse 115 to 120. The limbs had a woody feeling when pressed upon. Palpation showed a fluctuation and over the tendons a sound as heard in tenositis was present. I saw him only one time. Two weeks after I saw him the family moved twenty miles away. A few days later (he was still helpless but had regained his eyesight), he had contracted pneumonia of some variety and soon died.

All this time I was at sea as to what the real trouble could be and what was the cause of it. Dr. Millican, above referred to, concluded that it must have been "malignant edema." But I had seen that disease, or condition, before and knew this to be something else. Later I saw the young man's father and inquired as to whether his son had at the time he was taken, or had had before, any sore on his toes or foot (the right). Then he told me that a few days prior to the night that he came home sick his son had dropped a scantling on his great toe and mashed the nail loose, that it had pained him very much, and there had been bloody pus around the nail, until he grew so bad.

This cleared the case to my understanding as to the cause. But still, what was it? I had consulted all my books, medical and surgical, without result. Later, Dr. Millican sent me a leaf of *The London Lancet*, for November 12, 1904 (pp. 1341–2), also a leaf of the *Gazette Médicale de Paris*, pp. 549–50.

The *Lancet* article was on "Inflammation of the Muscles With Special Reference to Two Cases of Infective Myositis," by Dr. John Hill Abram. Dr. Abram says, in part: "It has been my fortune in the last two years to meet with two cases in which an inflammatory process in a muscle was a distinctive feature in the symptom-complex. In spite of their rarity, muscle inflammations are important, from their deadly character. Thus, out of 17 cases of infective myositis alluded to by Lorenz, 7 were known to have died in from four to sixteen days. In one of my own cases death occurred on the sixth day. Again, in 15 cases of true dermatomyositis death followed in 11, and of 5 cases of myositis hemorrhagica all died."

Dr. Abram then quotes a classification from Lorenz's, including "the suppurative and nonsuppurative, the infective, and traumatic," and these are the main ones within the scope of this paper.

The author further states "that Branon's list of muscles affected in infective myositis runs as follows: pectoralis major, deltoid, triceps and biceps, psoas, quadriceps and the gastrocnemius."

I cannot give all of this valuable report, as printed in *The Lancet*. Let it suffice to say that this article was discovered after my own case had been published. I now knew what I had run against.

Second case. In August, 1906, I was called (a distance of 43 miles) in consultation in the case of a 15-year-old boy. The lad had been sick about three weeks. I found large abscesses in the gastrocnemius, deltoid, and pectoralis major muscles, as also in the psoas on one side. I knew that there was pus in all of the sacs. The physicians in charge contended that there was none. I opened

three of them that morning and two in the afternoon. The family physician contended that it was "muscular rheumatism."

I soon learnt that one week before he was taken sick the lad had cut a small place on his left shin, which suppurated for three or four days and then dried up. Soon this was followed by a rigor, high fever, swelling of the injured limb, and in a few days all the muscles named were swollen and tense, with high fever, and spleen enlarged. I told the father that I saw no chance for his son. He died a few days later. This was my first suppurative case.

Third case. July, 1908. I was called to see a boy 11 or 12 years of age, who was or had been under treatment by two physicians, who both pronounced the trouble acute muscular rheumatism. I had talked to one of the physicians a few days before I was called and, after he had given me a description of the case, I told him that it could not be rheumatism, as the pectoralis muscles were not affected so early after the onset.

This lad had been down ten or twelve days and was still growing worse. I found that he had myositis. The whole body was swollen, as well as limbs. Temperature 103° F., respiration 38, pulse 126 to 130. Respiration was difficult, owing to the muscles of the trunk all being involved. This was the non-suppurative form.

The cause in this case was from the boy's being hot from working in the field, a hard, cool rain fell, he ran along the road, wading the cool water for nearly an hour. He was taken with a chill that night and at first complained only of his legs. Next day both limbs were swollen up to his body. He died of lobar pneumonia and endocarditis, fifteen or twenty days after I saw him.

These experiences had given me a dread of this disease and, as the literature was meagre on the subject, I was hoping to see no more of it.

But the winter of 1910, in and around the town of Heavener, Oklahoma, they had 10 or 12 cases, only 3 being of the suppurative form—two men and one young woman. All three died. In the case of the woman only one side was involved.

One of the three men (and who was the father of the woman) was taken with pains in his feet and legs, followed by fever and swelling of the limbs. I do not know how many abscesses were opened. He died of lobar pneumonia (double) about the end of the eighth week. The girl died, not long before him, of endocarditis. Her limb was incised in several places and a vast amount of blood-stained pus escaped.

The other fatal case was that of a stout man, 40 odd years old. He died in four or five days. I never saw him. There were no cuts on any of these fatal cases.

Later a young man and his wife were both taken with the rheumatic (?) form—as laid down by Lorenz. They were brought near to my place for treatment. There was swelling of some of the groups of muscles before mentioned. These people finally got well. The young man went to Hot Springs, Arkansas, for the stiffness of his limbs. Also one other man did the same, and came back in good shape. One young man, lately married, after working in the rain one day was taken suddenly and had to be taken home. Both of his legs and one arm were affected. He was not able to do anything for two months.

There is little need to say anything about the treatment in these cases. Antistreptococcic serum was used in only two cases, but too late.

The pathology of this condition seems to be little understood. Even Adam's great work says but little on the subject. There is no use in my referring to the different medical and surgical works that I have searched, in quest of this condition. Martin, in his "Surgical Diagnosis," as well as Butler, in his "Diagnostics of Internal Medicine," and, lastly, Anders, in his "Diagnosis," each have a very clear but only short article on it. Strumpell's work on "Medicine" is the best of any single volume.

My idea is that myositis is oftener encountered than diagnosed. For this reason, I write this, to stir up the subject among the CLINICAL MEDICINE "family," for the sake of scientific medicine.

CHEVES BEVILLE.

Waldron, Ark.

THE EFFECT OF PROTECTIVE COLLOIDS ON DIGESTION

Digestion concerns itself with the utilization of food in two forms, the crystalloids and the colloids. By crystalloids we mean compounds that, like sugar and salt, diffuse readily through animal membranes and as a rule can be obtained in crystalline form. They also dissolve in water, forming a true homogenous solution—no single dissolved particle being large enough to be seen under the most powerful microscope.

Colloids, on the other hand, are substances

that do not readily diffuse through animal membranes and the seeming solutions of which in water are merely heterogenous mixtures. The separate particles in a colloidal suspension may be seen by the aid of the ultramicroscope. Colloids may be obtained in such finely divided condition that their suspension in water has the appearance of a true solution and may even require years to settle.

These colloids may be coagulated into particles large enough to settle quickly by heating, by the addition of colloids of opposite nature and by the action of electrolytes (acids, bases, and salts). In the process of digestion of such food colloids, such as proteins and starch, the opposite effect is desired; that is, disintegration of the colloids into smaller particles capable of being absorbed by the membranes of the intestines. Such disintegrating agents are found in the enzymes, including pepsin and pancreatin, themselves colloids.

These, like all enzymes, or ferments, are catalytic agents, hastening reactions which without them would proceed very slowly. In all probability the enzyme of the digestive juices unites with the food and the resulting compound later breaks up to release the original enzyme and a disintegrated form of the protein or starch attacked. Naturally a very little enzyme can digest a great deal of food.

Milk is a suspension of casein and other colloids in water and is easily coagulated, or "curdled," by the addition of acid or by the lactic acid developed in souring. This merely means that the minute particles in suspension have collected in masses large enough to settle. Now, it is an interesting fact that certain colloids, such as gelatin and acacia, can protect the milk colloids from the coagulating effect of acids. Probably this is effected by a thin film of gelatin, say, around each particle. Whatever the explanation, the fact may be easily demonstrated.

To a definite quantity of sweet milk add just enough dilute acid to coagulate it, carefully noting the amount of acid added. Then, to another sample of the same milk, add first a 1-percent solution of gelatin. It will be found that the amount of acid used before will not coagulate the milk, in fact considerable more will be required. A very little gelatin, however, is just as efficient as a large quantity in its protective action. Another illustration of this protective action is shown in the gelatin layer on a photographic plate. Silver nitrate is easily precipitated by potassium bromide, yielding curdy silver bromide. However, if a gelatin solution be added to the silver nitrate before adding the bromide, no precipitation occurs. Silver bromide is formed, but the minute particles first formed are kept apart by the films of gelatin and so do not form large aggregates; an opalescent suspension results. It happens that this particular one is sensitive to light and thus gives us a photographic plate.

Undue curdling of milk in the stomach has caused much indigestion, especially in infants. The ferment rennin in the stomach exerts this coagulating influence. Nature has tried to check this coagulation of milk-casein by mixing with it a protective colloid, known as lactalbumin. It is a noteworthy fact that mother's milk contains a much higher percentage of lactalbumin than is found in cow's milk, in fact, the proportion of lactalbumin to casein is six times as great as in cow's milk. Ass's milk is even less likely to curdle and for that reason has occasionally been prescribed. Now, curds, when formed in the stomach, must be disintegrated before absorption, hence it is highly desirable to have as much protective colloid present as possible.

If a small quantity of gelatin is taken with the milk, curdling is prevented or minimized, exactly as in the test-tube experiment previously described. Acacia is useful in this respect, but of far less protective value. A highly interesting observation made by the author in this study was, that colloidal silver exerted a far greater protective effect on milk than did gelatin. Of course this was only a test-tube experiment and before advising its use with food the question of toxic effect in other directions would have to be considered.

However, in the case of gelatin no such caution is necessary. Gelatin is a cheap, palatable and nutritious food, and surely no harm can come from the use of a spoonful or less with any ration containing milk.

Another phase of this question is the emulsification of fat by the acid and alkali albumins formed in the process of digestion of proteins. Since fat must be emulsified into very minute drops before absorption, it is evident that fat of any kind should be accompanied by protein food, in order to permit the formation of the alkali albumin, an emulsifying colloid. Milk fat is accompanied, of course, by protein, but the fat is not emulsified to any great extent in the stomach—most of that is done in the intestine. If curdling takes place in the stomach, much of the fat is dragged down in tough, leathery lumps, which cause the "fat indigestion"

referred to by Herter, Czerny, Talbot, and others.

Cow's milk is not so rich in fat as mother's milk, so that it seems possible that after addition of a very little gelatin it may be really more easily digested than milk from the breast. Herter refers to a case where calcium salts were not absorbed and skeletal growth was arrested in consequence of fat indigestion.

We have everything to gain and nothing to lose by accepting gelatin served with meats or with cream or in salads, and we shall be "colloidally protected."

HARRY N. HOLMES.
Earlham College, Richmond, Ind.

THERAPY OF EUPATORIUM AROMATICUM

White snake-root is the common name for eupatorium aromaticum. It is diaphoretic, antispasmodic, and expectorant. One of the most important uses for white snake-root is for morbid wakefulness during typhoid fever. If the remedy had no other influence except this it would certainly deserve a place in the materia medica. In typhoid fever with irritation of the brain (typhomania), Dr. Frank Webb gives 15 drops of specific white snake-root, in 15 drops of hot water, hypodermically, repeating in half an hour. Dr. Webb says: "In irritation of the bladder, where the primary cause is vesical calculi, it is to be depended upon every time." He also says: "In some chronic cases of chronic bronchitis it seems to act like magic."

White snake-root influences the circulation by promoting the outward flow of blood and favoring diaphoresis and expectoration. Hence its usefulness in pneumonia, bronchitis, pleurisy, eruptive fevers, and so on. It relieves the heart and brain from pressure owing to congestion. The nervous system is influenced by this agent. It is a very good antispasmodic and useful in hysteria, dysmenorrhea, restlessness, and headache.

J. A. BURNETT.
Hartshorne, Okla.

COMPLETE PLACENTA PRAEVIA

When I was doing general practice in a small country town of 800 population in the northwestern part of Pennsylvania, I had the following experience, which may be of interest and instruction to some of the other readers of this Journal:

One cold rainy night in the first part of April, 1912, just after I had gotten into bed and gone nicely to sleep, I was awakened by the ringing of the telephone. Hastily arising, I received an urgent call to go out in the rain and cold to see another doctor's woman patient, about five miles distant. After dressing, hitching up my team, getting the much-used obstetrical bag, with its usual supply of instruments that I always carried, and those which I thought I might need in this case (for they told me that the woman was bleeding profusely) I started, arriving at the house at about 11 o'clock. Here is what I found.

A girl 18 years of age, small, short of stature, very closely built, and, needless to say, she was a primipara. She was lying in bed with her clothes all soaked in blood, so weak she could hardly turn over; her pulse was hardly perceptible, beating 140 to the minute; temperature, 98° F.

Hastily cleansing my hands with bichloride solution, I made an examination, and found the cervix dilated sufficiently to admit my first three fingers. Adherent all around the cervix, was the placenta. Owing to her extreme weakness, it was not advisable to deliver at once. So I packed the vagina well with gauze and stopped the hemorrhage, washed her off, changed her clothes and the bed, and made her as comfortable as possible, and administered strychnine hypodermically. Then I obtained the following history:

The last time she was unwell was in the last of July, 1911. Everything seemed to be getting along all right, until in November she had a bad hemorrhage. They called their family physician, and he kept her in bed for a few days, and gave instructions for her to be careful, and if she had another hemorrhage she must immediately go to bed, and let him know. Everything again went nicely until in the early part of February, 1912, when she had another bad hemorrhage, and was compelled to stay in bed for a week before she was able to get up. She never fully regained her strength up to the present moment.

The family physician called us up at 1 a. m., and asked about the patient. I told him the conditions and requested him to come out at once and bring a nurse along. He got there about 2 a. m., and shortly after he arrived the patient began to have some pains and the hemorrhage started again. After consultation we thought best to deliver at once. So we had the necessary instruments sterilized, prepared a table, administered an anesthetic, and delivered the baby, which was dead.

I dilated the uterus and inserted my hand.

I got hold of the baby's feet and did a podalic version, making a breech-presentation, then delivered the baby. As I did this I had the other doctor press down on the abdomen over the uterus, to keep the hemorrhage in check. As soon as the baby was delivered I packed the uterus with gauze, which kept the hemorrhage checked; however, the patient died during the morning hours, as a result of the excessive loss of blood. It is the hemorrhage in these cases that is the most dangerous, and if we could see the patients soon enough more lives could be saved.

Jellett says: "The first point to recognize with regard to the treatment of placenta praevia is that, immediately the condition is diagnosed, steps must be taken with a view to ending the pregnancy. The only exception which may be made to this rule is in those cases in which the patient is in such circumstances that, if the bleeding restarts, she can be immediately treated." But to the physician doing general country practice, he cannot always be in a position to give immediate treatment in these cases, so I advise immediate delivery as soon as placenta praevia is diagnosed."

J. C. Coulter.

Charlottesville, Va.

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[We referred Dr. Coulter's letter to Dr. Rittenhouse, who commented upon it as follows: "It is not my custom to terminate the pregnancy as soon as the diagnosis of placenta praevia is made, because I believe I can save more mothers, and especially more infants, the other way. A forced delivery before labor has set in is not free from danger to the mother, and is almost certain to sacrifice the child. Of course, every case is a law unto itself to a certain extent, but the foregoing indicates my general custom."—Ed.]

THE SECRET OF OLD AGE

Interest attaches to the declaration of Professor Metchnikoff, of Paris, that the indols and phenols in the large intestines are responsible for the decay of the human system, and which is known as old age. He claims that they can be destroyed only by sugar or by his recently discovered sugar-producing bacilli, which latter he has called "glycobacteria," at present found only in the colon of the dog.

In additon to the ingestion of these bacilli, artificially produced, Metchnikoff thinks that a vegetable diet—including particularly beets, carrots, and dates—is of assistance in furnishing the system some of the sugar it needs; although he admits that sugar as such is not found in the colon.

In Metchnikoff's opinion, if sufficient glycobacteria can be liberated in a man's intestinal tract, his life can be greatly prolonged.

As is ususal when any scientist lays claim to a new discovery, this modern Ponce de Leon is ridiculed by some of his French confreres, and the assertion is freely made that indols and phenols play no causative part in senile decay.

Metchnikoff's standing as a scientific investigator will, however, assure him a respectful hearing, and all mankind will join in the hope that his theoretical findings may develop into actual facts.

Leonard Keene Hirshberg.

Baltimore, Md.

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[Bulgarian buttermilk, à la Metchnikoff, seems to afford no assurance of long life in Bulgaria during these strenuous, warlike days! However, the Bulgarian lactic-acid germ certainly does prove effective in cleaning up the alimentary canal.—Ed.]

APPRECIATION AND OPINIONS

Billy Sunday is campaigning in our town, and that may help to account for my demonstrations over the October Clinical Medicine. For, as I read that number, I thumped the arm of my chair and said, "Glory be," repeatedly. The first article on "Optimism," with the Cumberland saying, brought the first blood.

And closely following came "Obsolete Ideals," and the paragraphs on "Contentment or Discontentment" suited me precisely.

Then the special and general articles; all too good to criticize; and I am like the youngster, who, seeing his favorite dish of dumplings on the table, pushed up his pan and shouted, "Dim me all of 'em!"

I attended a confinement lately. Mother very nervous. (It was the 13th of the month!) Gave one of half-strength H-M-C. Delivery rapid, almost painless, and she could scarcely be convinced that all was over.

In a number of cases of indigestion, I am getting much relief from calcium sulphide; and they come again for the little gray pills. Is it the antiseptic action they exert?

Am having great success with echinacea in septic conditions. One bad case of erysipelas of head and face. Woman of 70. Used

pilocarpine to effect. Echinacea and baptisin, calcidin and nuclein, with compresses of saturated solution of epsom salt locally; and, while she was sick, the case went on to uneventful recovery.

An observing physician says all diseases are caused either by shock or strain, physical, physiological or mental. It has been interesting to me to study my cases to test the truth of the statement, and I am fully convinced that much serious illness might be averted if the family physician were employed by the year and then would see his patients every so often, and by advice or other treatment save the shock or lessen the strain.

J. F. SHANE.

Steubenville, O.

A STORY OF AUTHORITY BY MULTATULI

Thugather milked the cows of her father, and she milked well, for the milk which she brought home produced more butter than did the milk brought home by her brothers. I'll tell you how this happened, and then take heed that you know the story well—should you ever have to go out milking. But I tell you this, not because you would milk like Thugather, but to show you how her brothers, by milking less well, did better—at least, more wisely.

Before the young peasants enter the pasture, yea, long before that hour, the cows are waiting by the fence, to be delivered of their abundance, which, properly said, they prepared for their calves. But men eat these calves, because they wish to; and, besides, there is too much milk in the cows' udders.

But what happens while the cows, standing sleepily chewing their cuds, are waiting by the fence? Surely, you already have guessed it—the lightest portion of the milk—the cream, the fat, the butter—gathers in the upper part of the udder, and, therefore, is the farthest away from the nipples. All who milk patiently to the last drop bring home fat milk; while all those who are careless and in a hurry do not get the cream.

Thugather was not in a hurry, but her brothers were, for they pretended that they had a right to something better than to milk the cows of their father. The young woman, however, did not think of such rights, and, so, always performed her duty well.

"My father has taught me to shoot with bow and arrow," one of the brothers said. "I can live by hunting; I will roam and work for myself alone."

"He taught me to fish," said the second one. "I were a fool, indeed, always to be milking for somebody else."

"And he showed me how to make a boat," the third one spake. "I am going to cut down a tree, throw it in to the water and ride upon it. I want to know what there is to be seen on the other side of the lake."

"As for me, I should like to live with the blonde Gune," declared a fourth one of the sons, "that I may have my own home, with our sister, Thugather in it to do the milking for me."

Thus every brother had a wish, a desire, a *will*. And they were so absorbed in their selfish desires that they gave themselves no time, when milking their father's cows, to take the cream too, which now the cows had to keep without profit to anyone.

But Thugather milked to the last drop.

At the last the brothers spoke up, saying, "Father, we are going away."

"Who then will milk my cows?" asked the father.

"Why, Thugather, of course," they answered in chorus.

Said the father: "How will it be when she too wants to sail, to fish, to hunt, to see the world? How when *she* too gets desires to live with something blond or brown so that she might have her own home and what goes with it? *I can spare you*, but not *her*. For the milk that my Thugather brings home is fat."

Then said the wily sons: "Oh, father, do not teach your daughter one single thing—then will she keep on milking your cows to the end of her life. Do not show Thugather how the springy sinew of the bent bow shoots away the arrow: she will then have no liking for hunting. Hide away from her the stupidity of fishes, who will swallow a sharp hook when it is covered over with toothsome bait; she then will not think of throwing out hooks or nets. Do not teach her how to hollow out a tree and how she can float away in the boat to the other side of the lake: then she will have no desire to see the distant shore. Lastly, do not ever let her learn that, in company with a blond man or a brown-haired one, she can make for herself a home and all that goes with it. Let her never know any of all this, oh, father, for then will she stay with you forever, and the milk of your cows will be fat! But, as for us, let *us* go, father, every one as his heart may desire." Thus spoke the four sons.

But the father, who was a wise and thoughtful old man, continued to argue. "Prithee," said he, "and who shall prevent her from

learning the things that I do not teach her? When she sees the fly floating on the stream? When the hard-stretched thread of her spun yarn shortens back to its former length, and quickly shrinking, mayhap accidentally propels the bobbin of her loom? When at the brink of a brook she spies the fish biting after the twisting worm, but, failing from wrongly guided eagerness, hooks to the sharp reed-joint? And last, but in no manner least, when she finds the little nest which the pair of larks built themselves in the blossoming clover in the month of May?"

After pondering a spell, the sons made answer to these qustions: "She will learn nothing thereby, oh, father. Our sister is too stupid to create desires from wisdom. *We* ourselves should not have known of any of these things had you not told and instructed us."

But the father replied: "No, no, the girl is not stupid, and, I feel sure, she will soon discover all by herself what you young men did not find out without being taught. No, my sons, Thugather is not stupid!"

Then the sons thought the things over once more, and their thoughts this time went deeper. At last they said: "Father, tell our sister that *To know, to understand, to desire*—is sinful for a girl."

And this time the very wise father was satisfied. He let his sons go away, to fish, to hunt, to go sightseeing, to marry, to go and do as might suit each one best.

But the father forbade knowledge, understanding, desire to Thugather, his daughter, who, in her innocence, went on milking the cows to the end of her life.

And thus it has continued to be in the world until this very day.*

D. A. Zwigtman.

Niles, Mich.

THE EXPERIENCE OF AN EAST INDIAN PHYSICIAN IN TREATING PNEUMONIA

Some four years ago I first learned about active-principle therapeutics by reading an advertisement in *The Therapeutic Gazette*. The advantages of the alkaloids, as there presented, attracted my attention at once, and I wrote to America for further information and also for a supply of them. The literature I received further increased my desire to use these remedies in my daily practice, but it was only about a year ago that I succeeded in procuring a satisfactory supply of these agents. I am now glad to give you a brief description of some of the successes I have had, especially in the treatment of pneumonia.

I do not know whether you have any idea of the conditions under which country doctors practice in India; I mean by "country doctors" the qualified government-licensed practitioners in the villages of the interior, far away from the larger towns. There is no law to prevent quacks from practicing in India, consequently we have to compete with many charlatans of small education, and many of the cases come into our hands only after the patients have been treated by these gentry.

Speaking of pneumonia in particular, as an illustration, only those victims who are intelligent come to us early, while the majority of the natives fall into the hands of these morally weak practitioners, who care little for the lives of other people, always give high hopes of recovery to the friends and relatives of the patient, and never permit a qualified practitioner to be called in if they can prevent, lest their prestige in the community be impaired. It is only when some of the friends of a sick person happen to be intelligent and understand the real situation, that a competent physician is urged and we come to see the patient. By that time, the sufferer from pneumonia as a rule is in about the following condition:

The patient's temperature is usually high —104°-105° F.,—with a degree of variation morning and evening; and has been in this condition for more than a week. He is unconscious, often delirious; bowels have been confined for four or five days; there generally is tympanites and severe pain in the adbomen; the tongue is furred; pulse is 130 or more; the first sound of the heart is absent; usually a condition of pulmonic consolidation is discovered, the area showing a tendency to spread; scanty tenacious blood-stained sputum is expectorated.

Now imagine how difficult the condition i with which we have to deal. Often our patient lives eight to ten miles away, and perhaps we can call but once or twice; nevertheless we are expected to effect a cure.

In such cases of pneumonia, I succeeded in curing eight of the subjects, with but two or three visits in seven or eight days, but following the active-principle method of treatment. It is not easy to accomplish such results, because in the homes of our patients in India people have little idea of

*"*Multatuli*"=I have suffered much, endured much. "Thugather" =Daughter (Sankrit); milkster (Hindustani), "Guni"=Female; in general, a woman (Hindustani).

time, as to when and how often the dose is to be repeated; and it is practically impossible to "push to effect," because those in charge do not understand what we are trying to do.

Providing I see the patient in the congestive stage, or if pleuritis is present, I generally put on a mustard plaster first thing. Then I give six granules of the calomel, podophyllin and bilein compound, 1-2 dram of nuclein solution dropped on the tongue, and one dosimetric trinity granule is given every half hour for twelve hours.

The next day there is observed almost invariably marvelous improvement in the patient's condition. The bowels have moved five or six times. (Here in India we rarely use salines, as patients do not like purgatives. The saline laxative I usually give two days later.) The pains are gone, the temperature has fallen, the pulse rate has come down, and hope can be read in the face of the patient.

Now I give one granule of strychnine arsenate, two of digitalin, two of scillitin, and one of emetine, besides three 1-3-grain tablets of calcidin. Such doses are given every two hours for twelve doses. As a result, the cough becomes looser and the pulse rate falls to 90 or 95.

I also give the benzoates sometimes, in order to liquefy the tenacious sputum. Occasionally potassium bichromate is used; but nuclein is employed throughout, 20 minims on the tongue at a dose thrice daily. Atropine is employed in the early stages and seems to limit the formation of congested areas, through dilating the capillary system.

Here is an illustrative case. Patient, wealthy man, 54 years old, living in rich district; no diabetes and no alcoholism; has suffered from spasmodic bronchitis for the last two years; bronchial secretions are scanty; few râles heard, with wheezing respiration; expiration prolonged; slight dyspnea; hoarseness every evening, with troublesome cough at night; no paroxysms of asthma; no fever; cough varies with the humidity.

I put this patient on calx iodata, scillitin, antiasthmatic compound, lobeline. This promptly relieved the evening hoarseness, but did not produce much general benefit until I added glonoin. Since then the dyspnea has disappeared. An antiasthmatic combination was used, also ammonium benzoate, but without much benefit, although the dyspnea was relieved. When I added emetine to every dose, marked benefit was obtained.

The asthmatic condition has been entirely relieved, the patient expectorates less and can now sleep at night without being disturbed by cough. He takes 3 1-2 grains of opium at 3 p. m. Gastric acidity is present, for which he uses potassium bicarbonate as a routine measure.

N. CHATTERJEE.

Chakdighi, Burdwan, India.

[There are several things that can and should be done in this case. First determine the bacteriologic picture. No doubt there are good clinical laboratories in India to which samples of sputum can be submitted for examination. This should be attended to at once. Probably the report will give the key to the treatment. There is a possibility that the hoarseness and bronchial discharge may be tubercular; but it may be due to a mixed infection, and we are inclined to think this the case. Very often affections of this character yield to treatment with bacterial vaccines.

Meanwhile, the drug treatment must not be neglected. Dr. Chatterjee's success shows that he is following right lines. We believe that two of the drugs employed might well be pushed hard, i. e., calx iodata and lobeline (either lobeline sulphate or lobeloid). The former we should give in at least 5-grain doses, and the latter to effect—hypodermatically usually. Look to the heart. If its action is weak push strychnine arsenate and digitalin. It is most unfortunate that the patient is depending upon opium, since this complicates the situation. Finally, insist upon thorough bowel elimination and antisepsis. The hoarseness *might* mean syphilis —investigate! Fact is, there are so many possibilities that we can not follow up all the "trails" which may lead to the center of this interesting clinical maze. Anybody suggestions to offer?—ED.]

SANITATION IN HONDURAS. SALVARSAN CURES MALARIA

In company with my wife, we left New Orleans, Louisiana, October 2, 1913, and arrived at our destination, the city of San Pedros Sula, Honduras, at half past twelve o'clock in the afternoon of the 12th. This city, my present abode, has a population of about 7000, and is situated 47 miles inland from Puerto Cortez, being reached by means of the Hondurian National Railway, a narrow-gauge railroad of fairly good bed but very badly worn-out steel.

The altitude here is about 150 feet above sea-level, and the days are hot. Directly on the west side the mountains rise up to 1500 feet, and from these flumes bring the water supply. The water-works are as fine as I

have ever seen, and the 18-inch pipes are started from a mountain-stream 300 feet above the city, at a small concrete dam, and run down to the ice-factory, where the pressure furnishes the power for the plant. From

A village street in Honduras

the wheel the water goes to a settling-pool and thence to the general water-main. The water is free for all users and its liberal consumption is almost made conpulsory, since the yellow-fever scourge in 1905 that came near putting the city out of existence. The expenses are raised by taxation, in order to preclude any possibility of the natives being economical with the use of water.

The sewage is conducted in open concrete ditches running along both sides of all streets, and there constantly runs through them a brisk stream of water. All closets are located over these ditches, but the quantity of water passing is so great that one can never notice any fecal matter in it. The city is also well lighted by electricity, the same stream furnishing the power; but the electric-light plant is privately owned.

Still, with all this sanitation, San Pedro is not a very healthy place. There is not a screened house in the city, and the mosquitoes (very plentiful) certainly do spread malaria. There are very few house-flies here, in fact, one will hardly notice them at all. This is so because of the absence of breeding-places.

According to an agreement of the Pan-American Union, all these republics reciprocate in the registration of physicians. An American physician desiring to practice here can register by having the genuineness of the signatures on his diploma certified to by his nearest Hondurian consul in the United States, with any other proofs, such as a certificate of membership in the association to which he belongs; with this evidence attached, make application to the Secretary of State. No fee is charged. In Honduras, it is usually best to employ a local attorney, who will charge about ten dollars, to complete the legal arrangements. In fact, one engages his influence, since there is some feeling against foreign physicians, especially in Guatemala. This "feeling," however, arises from the presence of the local medical college, which is ever alert to its own interests.

I am sending a photograph of a papaya carica tree. The fruit is here used only for food, usually for lunch or the noonday meal. Most foreigners have to cultivate the taste for these papaws, although I liked the first one I ever tasted. The meat is yellow and a little firmer than that of a ripe muskmelon, and is served either with or without salt and pepper. The unripe fruit, when cooked, makes an excellent vegetable. The leaves are used to render meat tender. For the latter purpose, three hours before cooking the meat is carefully wrapped in the green leaves, which exude a milky juice (containing the

A papaw tree, with its fruit

papayotin), and the whole then is wrapped in paper, to insure close contact. The result is very marked, as proven by a careful personal test. This juice resembles that of the fig-tree; also the leaves, though larger, are shaped the same as those of the fig-leaf. This fruit at first had the effect of a laxative on me to such an extent that I was compelled to desist from its use for a time.

The papaya is not new as a medical plant but I have found a thing here very new to me, and quite a nice one. The following data I owe to the kindness of Dr. M. Paz, a local native physician. *Chan* is the common name for a seed of a variety of papaya grown in the interior, especially about Santa Rosa. When placed in water, these seeds quickly yield a mucilaginous mixture, to which the natives add vanilla or any other flavor, with sugar to suit the taste. It is used to quench thirst in fevers, very much as we use slippery-elm or acacia-gum solutions in the States.

Malaria being the chief malady here, the salts of quinine are admitted free of duty; but the local physicians have begun the use of salvarsan with satisfactory results. Dr. I. J. Jones, a physician of Honduras for twelve years, says:

"Having observed reports from the French army officers on the use of salvarsan and neosalvarsan as a remedy for malaria, and particularly in those forms produced by the estivoautumnal parasite, which prevails here, the staff of the local hospital began its use. To date, we have made about 300 injections intravenously. The results have been uniformly beneficial, many cases very strikingly so. In addition to the curative effect, it exerts an immunizing action that lasts for three to five months. Cases of very marked cachexia, including enlarged spleens and livers, with anemia of high grades, are rapidly cured without other remedies than salvarsan. We have treated 100 cases of syphilis in different stages with salvarsan, also with good results, the most marked effect being in the secondary stages. Good results have been obtained also in tertiary paralysis, in many instances radical cures."

T. H. Standlee.

San Pedro Sula, Honduras, C. A.

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[The observation regarding the value of salvarsan in malaria is most interesting. No doubt the drug will be thoroughly tried out in the pernicious forms of the disease. In this connection it is interesting to note that several cures of pernicious anemia have followed the use of salvarsan.

Dr. Standlee sent us some "chan" seeds, and we have found them a very pleasant demulcent.—Ed.]

ALKALOIDS AND BIOLOGICS

Yes, the alkaloids and the biological products are taking away the slavishness and the uncertainty of medical treatment and the dangers of many of the diseases.

What the profession most needs is more doctors who are willing to use enough gray matter to keep up with the procession. It takes the exercise of gray matter, but the more it is exercised, the easier and the more delightful it becomes. I look forward to an old age of study with delightful anticipation.

L. V.

—Kansas.

EMETINE AND IPECAC IN INDIA

The "family" surely must be very much pleased to learn of the beautiful results following Rogers' discovery of the value of emetine —the active principle of ipecacuanha—in the treatment of tropical dysentery and allied disorders. Within the next few months we may confidently look for even more splendid results from this alkaloid; and those who have closely studied the virtues of ipecac in various diseases should not be at all surprised at the discovery of new applications of emetine.

As for us here in India, we have had excellent results in acute dysentery from bulky doses of ipecac, and though the ensuing nausea was almost unbearable, the effect always was splendid. We did not know, nor care to know, what would come from such vomiting and the elimination from the stomach of its poisonous contents. We looked only on the effect upon the bowel. Whether the benefit was caused by the action of the drug on the liver directly or due to the pressure on that organ from excessive vomiting was not given serious consideration.

Ipecac has a decided action on the liver, and that action is owing to its emetine; which fact, unfortunately, was not formerly properly understood and, in consequence, that alkaloid was removed from the drug. The ipecac actually was depleted of its emetine and "ipecacuanha sine emetino" was presented to the profession—with what result, you already know. The patient was thank-

ful for getting medicine that did not cause vomiting; but we doctors were not satisfied with the indifferent results secured.

Now, however, Rogers' discovery surely will put ipecac into that high place that it deserves, and it will be the dosimetric system of dosage that will be successful. It will not be necessary, absolutely, to give the drug hypodermically; a clean, empty stomach will be quite as good a route for the introduction of the remedy, provided that viscus is properly made ready for its reception.

I was taught to give a large dose of ipecac (30 grains) once every week when treating syphilis with mercury and opium—the pill of mercury and Dover's powder. The vomiting produced by this large dose of ipecac gave excellent results. Now, might it not do as well to add to the medication a small dose of emetine every day, instead of one large occasional dose? What do others think?

In respiratory diseases of children, emetine is known to play a good part, and all the "family" knows it. It is its action upon the liver and the abdominal viscera that is to be studied in detail.

Every physician should study the active principles, and with one selfish view, which is, to prolong his own life and make himself happy in his old age. One's own life is more valuable than all the rest of the world, and the selfish motive inspires me to learn new things.

When the plague broke out, I was sure of being attacked some day. So, I learned, and made popular among my friends and people the hydropathic ways of fever treatment. When I found pure water was rather injurious, I added salt to the water, making it a normal saline solution for drinking purposes, and brine for baths, and I got better results. With the alkaloids to help me, I saved my own life, in the year 1906, from a dire attack of the plague

Since reading Doctor Roemer's letter in CLINICAL MEDICINE I have been trying dosing with emetine for my liver, since I had a very large abscess twenty years ago. I am hopeful of obtaining good results. It is my wish that the old-style physician would study the active principles with this personal selfish motive. He must be conversant and well versed about prolonging his own life; and this he can do by trying the alkaloids on himself for ailments from which he suffers.

Ipecac was used by missionaries, many years ago on the Island of Formosa, with good results in the treatment of the plague. Of course, this must have been used in the beginning of the attack, with the idea of cleaning out the stomach, not taking into account the general result that such a dose produced on the body, and particularly upon the liver.

In short, emetine deserves a place in the front. It was once in front. through the use of the ipecac root itself, but was slighted and driven out for a few years. However, thanks to Rogers' discovery, it will again be given the consideration it deserves at the hands of progressive physicians.

I appeal, through your journal, for the use of more of emetine hydrochloride in the management of disease.

VAMAN BAJI KULKARNI.

Bombay, India.

EXPERIENCES WITH DIPHTHERIA

That peculiar cough, that brassy cough that frets the hearts of those who realize its import when they hear it in the little ones as the bark of laryngeal diphtheria, haunted the ears of Doctor Bleil, as he frankly admitted in his article on "Diphtheria" in the October issue of CLINICAL MEDICINE. Well it was that this peculiar cough caught attentive ears ere it was too late and got him busy till the conquest was his.

Better, still, that his patient was not a helpless wee tot in the throes of suffocation. How many little mounds, long ago grown green, dot the myriad cemeteries, because the significance of that peculiar cough remained unheeded till hope was gone and science stood aghast, defeated!

But what otherwise can be expected when oft the initial treatment consists of home-remedies, however well meant and tenderly given?

Nor is it always easy for a physician to recognize the condition back of that peculiar cough. Think you a throat-specialist infallible? Take heed, though nigh every diseased thing panders to and riots in specialism, there is still hope that the family doctor will be saved a corner in that great subdivision in which he can be identified apart from his sphere of measles, chicken-pox, and worms, and be spared making tracks for the Poor House! The following case reflects a bright spot in this pessimistic outlook.

Years ago a mother took her boy to a specialist for an examination, who, when he had concluded it, said he thought the child's trouble lay in the lungs. So, she brought her son to me. Laryngitis, probably diphtheritic, was my diagnosis. The first culture

showed diphtheria. Apart from getting busy with a steam-apparatus and having on hand a suitable tracheotomy-tube, should emergency require, no other data are vouchsafed by memory. But he recovered!

Puzzling, think you, to differentiate from bronchopneumonia? Certainly, if you neglect to use your eyes and ears.

When my sheepskin was young and yet sufficiently modest to hide its date, a kind neighborly lady came and asked me to visit a three-year-old child; for the attending physician's *dictum* was, "The child is dying from pneumonia." The parents were resigned and awaiting the last call. However, a ray of hope flashed a rift in the grim shadows when, after a subsequent examination by myself, it was explained that there was false membrane in the child's throat and that an operation might possibly save it. In the consultation, Doctor Farnum, who taught anatomy and knew it like a book, concurred, and just before beginning to operate he observed a piece of membrane that was coughed up by the child; this cinching the diagnosis. Tracheotomy saved the little girl, but in a moment when unguarded she withdrew the tube and tossed it away.

A hurried call got my feet scurrying from a nearby patient to the bedside of the little one, and, although it went out that "the child is dead," two feathers deftly manipulated in the dim lamplight admitted sufficient air till the tube could be replaced, and the child's spirit, though it nigh had "crossed the bar," returned, and she who was thought dead grew strong and blossomed into womanhood.

A boy was apparently sleeping his last sleep. The father walked the floor, exclaiming, "There is not a doctor in America who can save him." Tracheotomy saved the child. Victories in 1891 for Dr. Tracheotomy and his adjuncts!

The two preceding cases are not included in the following report of 104 cultures from the throats of 90 patients; 50 of whom showed diphtheria, the rest negative. Mortality from diphtheria, 4 deaths and one, another's case where I assisted not included, 8 percent. Four intubations, 1 (diphtheria) died, 3 (negative) recovered. Three at least of the fatal cases did not receive antitoxin. Two patients treated one day, dead the next. Two apparently convalescent died of cardiac paralysis. Out of the 90 patients, 12 received antitoxin.

Case 1.—Was this complicated? Scarlet-fever too? Girl, 4 1-2 years. Previous history: sick with fever twelve days, nine of which she was treated by another physician, whose two cultures were returned as negative. Clinical history: temperature, 102.3° F.; pulse 100; spotted rash about buttocks, slight erythema of body and eczema on lower extremity; exudate on tonsil, diamond-shape ulceration of soft palate and membranous deposits thereon. Culture returned as diphtheria. By this time pulse was 140; respiration 60.

I gave 3000 units antotoxin. The third day, pulse 120, respiration 28, throat scarlet, membrane still visible. The sixth day. throat clear. Onset of bronchopneumonia Morning pulse 140-150; respiration 58, afternoon pulse 160; respiration 60; urine showed casts and albumin. Then followed: nephritis, double suppurative otitis, five abscesses (mostly submaxillary, cervical, and the like), and facial paralysis. Enough? The patient as well as the writer survived! February 12, 1899, to end of May, with the ledger still open for payments!

Case 2.—September 12. Adult, male, 23. Had diphtheria when ten years old, with other members of family. September 13, membrane on tonsil and uvula. Diagnosis, diphtheria. First culture was negative. September 14. Right tonsil and contiguous tissues swollen and occlude fauces.

I injected 2000 units antitoxin. Temperature 102° F. I injected another 2000 units five hours after. The second culture was negative. September 16. Pulse 80; temperature 99.4° F. Posterior pillar of tonsil covered with membrane. The fourth culture was affirmative. September 20. Recovery without sequelæ.

Bacteriologist's report read: "After over forty-eight hours incubation of first culture a profuse growth of diphtheria bacilli was obtained."

Moral: Let them incubate, but inject antitoxin before your patient is a dead one! Criticism? Why, he should have injected more antitoxin in his cases. Certainly, now! But when you are up against prejudice, aggressive kiddies, and the price, bucking is at a premium!

Case 3.—Child, 2 years. Sick five days. Membrane on tonsil, throat swollen. September 2. Gave 2000 units. At 12 p. m., pulse 124. September 3, at 5:45 a. m., pulse 140. September 4. At 7 a. m., gloom! 1000 units. Culture returned as affirmative. September 5. At 9 a. m., pulse 100. Bright. September 6. Throat clear. September 8. Recovered. Antitoxin scored here, and stim-

ulants. In five days well, and fourteen visits.

Case 4.—Postdiphtheritic paralysis. Child female, sick from December 13 to February 23. Refused food. Laryngeal paralysis. Prominent symptom, cough; but that churchyard cough caused hope to battle against hope, still, under hypodermic treatment (strychnine, in the main) the battle was finally won. Received no antitoxin.

Case 5.—Boy. Received 3000 units antitoxin the sixth or seventh day. First physician did not send culture. Mine was returned as negative. Two months later he developed paralysis and was unable to lift head from pillow or to walk. Food, tonics, strychnine hypodermically, and crutches restored him to health in about two months.

My treatment: Antitoxin early and in sufficient doses. Late effects *nil*. In nasopharyngeal cases, I syringe nares and spray throat. Use weak alkaline solutions in the young. Poisonous solutions should never be used in young children, and only in the older ones who can return it by expectoration. Never allow the laity to use swabs or sprays. Use them yourself. Calcium sulphide to saturation in these cases, and preparations of iron with strychnine from the start. Nuclein would be a good adjunct. Laryngeal cases require, in addition to antitoxin, calx iodata frequently to effect.

Use steam continuously. If you do not have a steam spraying machine, buy one. Meanwhile slake lime in small quantities at the time under an improvised sheet-tent—a life saver I found it in treating cases not reported here. These tots need lots of air; so, do not shut it out with tents badly arranged. Never let a little one die without giving it its last chance.

Try tracheotomy or intubation, or both. But alkaloids! Though thou knowest the stars and telleth them by name, yet know not nor use alkaloids, your wisdom may count as naught, doctorally!

MORRIS HARVEY.

Fruitvale, Cal.

[Also, the doctor who knoweth antitoxin and useth it not, and useth it not early and in large doses, his name shall be anathema. Suspect diphtheria? Then give 5000 units. Are the symptoms severe or the case advanced when the patient is first seen? Then give at least 10,000 units. And if thou are wise neglect no measure that may remove local sources of infection; that may give comfort; that may prevent complications; that may sustain strength and forestall disaster. Dr. Harvey's advice is excellent, and wise is he who profiteth thereby.—ED.]

THE DIGESTION OF OUR MEDICAL LITERATURE

Words are not always definite; several significations may attach to a word. What, then, do we mean by the word digest?

A man with an empty stomach feels and sees but one meaning: he says, "Hunger is my cook; my labor brings me meat, which best digests when it is sauced with sweet."

To dissolve in the stomach and be converted into life-giving chyme, is a very important kind of digestion.

But there is another meaning, which is, to arrange and condense. Nowadays we should have more written on this plan. Readers of this age are too busy to ponder over prolix and verbose chapters and articles. They must have their mental food well digested and concentrated.

Thus, how repulsive to the eye are solid, black and unbroken pages of a book or paper, with unleaded lines and few paragraphs. Such matter often is read or scanned with a sweeping and skipping glance, and then relegated to the high shelf for a long repose. The editors of such matter may be good, clever, adipose fellows—not always saturated with nicotine—but they lack taste and art, and fail to appreciate the spirit of this electric age.

Digestion and concentration of thoughts and facts, with liberal spacing to let the light upon black pages, would have been salt for them and pleasure to the reader.

Now the writer, acting upon these hints, may become erratic, but his concise and significant paragraphs will be read and digested for their lucid facts and ideas. Much originality will not be required of him. His readers will be satisfied with facts and apt suggestions. They want that which will enlighten and stimulate—be it original or plagiarism. In fact, there is not much actually new under the sun. Our inventions are, to a great extent, but shadows of lost arts, and often our brightest ideas have illumed the brains of our ancestors ages ago. We should be wise if we fully comprehended and appreciated all of the past. Invention, as well as history, frequently repeats itself.

Now there is room for the digester, he who can abstract and re-state facts in the least number of words for lucidity. Let him, to a

great extent, discard those pompous and useless words "I" and "We." Yes, and he may sometime save ink required to state authority —if, in such cases, he makes no show of originality. But let him not be oblivious to ideas and incandescent truths.

One cannot doubt but that such presentation of the progress and status of the age would be appreciated. Great observation and diligence would be required of one attempting such work—but there are different degrees in which it might be undertaken.

It may be true that a high, literary, and ornate style may not be attained in this way. But let us have more of the digested, redacted, and practical; illumed by the electric flash of concentration. Such pages may not be highly homogeneous, if only redolent with facts and ideas.

Some publishers have a clever way of doing things; with German houses it is a practice to issue "make-believes."

These are first editions, consisting of not more than a dozen copies. Then the words "second edition" are inserted. By this jugglery it is expected that both author and publisher may be benefited.

The old Greeks also had a very ingenuous deception. With them death could be made to appear joyous to sympathizing friends. The victim had but to partake freely of the root of the common buttercup. This highly poisonous substance will so contract and distort the muscles of the face as to produce, in the death-struggle, the appearance of high exultation, shouting and laughter. Death was thus made palatable—to the observer.

In the medical world of today, there is the same demand for elimination, digestion, and concentration; elimination of the inert and incompatible elements of the one agent desired. He who ignores this reform and fails to keep abreast with the advancing tide will find himself a back number.

C. E. Witham.

Lawrence, Kans.

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[What Dr. Witham says is absolutely true. Not only should our books and journals be presented in a typographic form which is attractive to the eye and easy to read; but the material itself should be given in a simple, direct, *condensed* form, so as not to weary the reader. Most men want facts without padding. They care little for mere opinions, unless such opinions have the weight of authority.

This condensed, right-to-the-point stuff is what we are most anxious to get. Also, it is the hardest to secure. Right now we want to know how a hundred of you fellows treat such diseases as asthma or chronic bronchitis —if you are using methods that make good; we want to know the new uses you are finding for pilocarpine, apomorphine, emetine, and a score of other drugs; we want to know some of your experiences with bacterin and serum therapy.

Why don't you tell us? Hammer it into us with a few hot words, written from the travail of the spirit after a hard day's work. Tell the other fellow why you failed—and how you made good. Don't make it a "bromide"—write us a real letter, just as you would to Brother Bill, if he were a doctor. Use "I" or "we" all you please—there we disagree with Dr. Witham.

Won't you do this? Let's all consider Dr. Witham's letter a call to (literary) arms! —Ed.]

CHLOROFORM DANGERS. TREATING TONSILLITIS WITH PAPAIN

Having just read an article by Doctor Abbott, entitled "Deaths from Anesthetics," sets me thiinkng whether conditions which I shall describe do not prevail in other parts of the country than where I found them. After practicing a short while in a southern-Michigan city of 6000 people, I was asked by my barber to give his wife chloroform at a dentist's, who was to extract some of her teeth. He informed me that a good many people had died there from the effects of chloroform; so many, in fact, that he did not care to take risks with any of the older doctors, so chose me, as the new man. I consented to do the job and when, he asked the fee, I told him it was $5.00. It took his breath, nearly, and he told me no other doctor there charged more than $1.00. Then he was informed that the material, if good chloroform was used, would cost nearly a dollar.

After due explanation, I was employed. Then a search for some of Squibb's or any other chloroform pure enough for anesthesia disclosed that none such was in stock in any drug store in the city; and everywhere I was met with a "Doctor, this is just as good and does not cost as much;" and the druggists, every one, offered me a certain cheap-grade commercial chloroform—no wonder their patients died.

Now I will tell you how I treat my cases of tonsillitis.

First give aconitine for the fever. Then

give a cleanout with calomel and podophyllin, followed next morning by a decided dose of hyposulphite of sodium; also leave a gargle of a saturated solution of the "hypo" diluted with an equal amount of distilled water.

Now comes the meat in the nut. If the trouble is follicular, then take a few small tablets of papain. Just moisten them, one at a time, as used, and with a swab or small brush apply the paste direct to the white matter in the follicle. The papain "eats it up." I have cleaned up a bad throat in thirty minutes by the frequent application of the papain; and right there convalescence was established. Try it, and be surprised.

W. K. JOHNSON.

Piqua, Kans.

[Chloroform is being regarded more and more as a dangerous drug, and an A. M. A. special commission has gone on record as opposing its anesthetic use. At any rate, only the very purest and best chloroform should ever be administered.

The papain treatment of tonsillitis is novel. Has anyone else tried it? Don't forget that many of these cases are essentially rheumatic; and that frequent recurrence suggests the trial of an autogenous bacterin—or tonsillectomy.

By the way, can't we have a dozen short reports on tonsillitis—all kinds—for our next issue? Do *your* part, Brother.—ED.]

A "FRACTURE NUMBER" OF THE AMERICAN JOURNAL OF SURGERY

The American Journal of Surgery will present in January an issue of their journal devoted exclusively to "Fractures and Their Treatment."

The following subjects will be presented by acknowledged authorities in this special branch of surgical work:

"Astragalus Injuries," by F. J. Cotton, M. D., Boston, Mass.

"Diagnosis of Fracture," by Lewis A Stimson, M. D., New York.

"Position in the Treatment of Juxta-epiphyseal Fractures at the Hip and Shoulder," by Fred. Albee, M. D., New York.

"A Splint for Maintaining Nail Extension During Transport," by John C. A. Gerster, M. D., New York.

"Fracture of the Skull: Roentgen Ray as an Aid in Its Diagnosis," by W. H. Luckett, M. D., New York.

"Vicious Union," by James K. Young, M. D., Philadelphia, Pa.

"The Immediate and Remote Results of Fractures of the Skull and Spine," by Chas. Elsberg, M. D., New York.

"Conservation in the Treatment of Fractures," by Wm. L. Estes, M. D., South Bethlehem, Pa.

"Some Phases of Fracture Treatment as Based on Hospital Experience," by E. S. Van Duyn, M. D., Syracuse, N. Y.

"The Treatment of Fractures," by E. P. Magruder, M. D., Washington, D. C.

COMICAL DELIRIUM-TREMENS CASE

On reading an article in a medical journal recently, giving the treatment in a case of delirium tremens, I was reminded of an amusing incident that occurred in my practice with such a patient several years ago. This man was a stalwart fellow, standing some six feet four in his stockings, and well put up in proportion.

My first call to attend him was in the middle of the night. He had aroused the inmates of the household, and had peremptorily ordered mater familias to provide an elaborate supper, under the duress of divers threats. This she was proceeding to do. I found the table spread, on which were broiled beefsteak, fried potatoes, fried ham and eggs, hot coffee, and everything else the fellow could think of that was in the house in the culinary line. The old woman was busily engaged in cooking flapjacks (!), and altogether the menu was sufficient for twenty men, and the patient had not touched a morsel. I administered a quieting potion and departed to secure a male attendant.

On the following day I received an urgent hurry call to see the patient, who had escaped from his attendant into an adjoining garden back of the house. On my arrival, I beheld a most amusing and comical sight. It being in the month of September, the patient had his attendant were having a race around and through a patch of green corn, among which there was a plentiful supply of ripe and rotten tomatoes, with which the patient had bespattered the pursuing attendant from his head to his feet. The patient finally recovered, although he, as well as the attendant and the old lady, have long since retired to the "happy hunting ground."

GEORGE D. STANTON.

Stonington, Conn.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

MY CREED

I will not yield this everlasting truth—
That joy soars far above each earthly sigh,
Set like a star in the deep night of ruth,
And throned in light too pure, too sweet, to die.
'Tis this that lifts bowed-down humanity
To thoughts sublime and actions that entwine
The heart of man with beauty. Earth and sky
Repeat forevermore, "All is divine,"
And through the grossest clay the smile of God
doth shine.

Doctor, hand this to your hypochondriacal, melancholic patient, and see if it won't do her more good than medicine.

"Laugh, and the world laughs with you; Weep, and you weep alone."

—

How true this is! I am reminded every day of the tonic influence of laughter, in its beneficent effects often more potent than medicine. Let us learn to tell a good story, to laugh and be cheerful; "don't wear your heart on your sleeve" but keep your sorrows to yourself. We all have troubles of our own, and people are too selfish and busy to listen to your tales of wo.

I am not arguing against sympathy, but it is idle to go about croaking, with a long face, soliciting sympathy and condolence from everyone we meet. Learn to hide your pains, aches, and sorrows under a pleasant smile. You need tell no one but your physician that you have earache, headache, heartache, corns or constipation. Don't, for heaven's sake, get the complaint habit. Cheer up! The sanguine optimistic man or woman is always as welcome as a beautiful spring morning; but the hypochondriacal, discontented, complaining individual is an unqualified bore and nuisance to everyone.

Just try for a year to smile and to acquire the cheerful habit. Put away all those wrinkle-producing, skin-withering, blood-impoverishing, soul-contracting feelings of envy, spite, jealousy, and self-love—those petty complainings, narrow-minded ambitions and all discontent, and make up your mind to enjoy life as you go along. "Joy is the sunshine of the heart and cheerfulness and honest mirth bring forth the blossoms and unfold the leaves, and their fragrance sweetens all our lives and the lives of others."

Fun often is better for a sick child than medicine. And, after all, we are but grown-up children; and, whether sick or well, we should not drain our vitality, shorten our lives, and make everyone about us uncomfortable by worrying. Cheer up! for our misgivings may not be true, and, remember, that mirth is the best tonic in the world.

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When the physician finds himself in the presence of organic maladies, that is to say, inflammations which, having run through their successive stages, have finally given rise to degenerative products such as tubercle or cancer, he has already begun to doubt his power; he has become discouraged through the impotence of his therapeutics and feels impelled, in spite of himself, to let matters take their course. In other words, such a one gradually falls back upon what we call "expectant treatment;" which, of course, is not treatment at all, but the neglect of it.

And what, candidly, can we do against, for example, an organic affection of the heart; against a tuberculous cavity in the lung; against the progressively infective elements of cancer, with their tendency to destroy adjacent tissues? This is a question asked every day by the physician. But ought he to abdicate in favor of all serious maladies, and undertake to treat only those the course of which is benign and whose treatment is easy?

Here, active-principle therapy is able to render him the most powerful aid, for it teaches that we may live comfortably for twenty years or even longer with a serious affection of the heart; or that a lung cavity may be greatly diminished, rendered aseptic, and often made to heal under the persistent use of the proper active principles. This mode of using drugs teaches also that even cancer during its evolution may be subjected to arrest of development; provided only that the physician—whose mission widens with the extent of the danger—understands how he

may combat, step by step, the symptoms in the successive order in which they may present themselves; how he may avoid or definitely meet all the complications, and how he may sustain the vitality which is constantly menaced by the wasting fever.

The results this man obtains will prove to him that he has done well not to remain a merely inactive spectator of the progression of the disease. And if it be that after all effort made the malady remain incurable, this physician will have the consolation of knowing that he has made his patient comfortable and has prolonged his life; the last-named result in very many special instances being a most important one.

The secure increased blood pressure, is one of the therapeutic indications most frequently to be met in certain depressed conditions (in tuberculosis, for instance), and strychnine is the chief drug to be employed for that purpose. The arsenates of iron, quinine, and strychnine are good supertensive medicaments, the dose being increased according to the susceptibility of the patient. Tuberculous subjects, among others, are observed to derive the best results from the daily ingestion of from 15 to 25 milligrams, given in three doses. The frequently employed combination of sparteine with strychnine seems a useful one, also.

Sparteine, as we know, acts rapidly, is devoid of cumulative action, and is the type of the cardiotonic drugs suitable for prolonged administration. Its action upon the blood pressure seems slight, but the heart effect is useful for preventing the tendency to cardiac overwork existing during the temporary pressor effect of agents such as epinephrin, with which it often is combined. The effective dose of sparteine is from 3 to 6 centigrams singly, and from 5 to 15 centigrams a day.

Epinephrin acts only partially, that is, it does not affect the greater proportion of the deep viscera; its evanescent constrictor action is followed by dilatation, which, in the kidneys, results in polyuria. The initial hypodermic dose of epinephrin should not exceed 1-4 of a milligram; the patient should be kept recumbent and with the head low for five or ten minutes after its administration, and he should also be warned that fugacious palpitation, pallor, slight vertigo, and depression may follow.

Extracts of the posterior lobe of the pituitary gland and their crystalline principle, hypophysin (isolated by Houssay, of Buenos Ayres), act much like epinephrin, but the effect endures from thirty to sixty times longer than that of the latter. Many observers have used the extracts with favorable results in tuberculosis and in acute infections where there is cardiovascular weakness, as well as in mitral involvements and chronic myocarditis associated with insufficiency of circulation. Hypophisin must be used in doses corresponding to 0.15 Gram of the posterior lobe, or 0.34 Gram of the entire organ. Smaller doses have been found ineffectual. The pressor drugs above mentioned may be variously combined or alternated in different conditions.

The tendency to misjudge others, and especially their capacity, is common. I myself have just been guilty of it. We all have been guilty of it. We are usually too selfish to look for good in others.

Lack of address, failure to seize the favorable opportunity, and modesty of character that shrinks from self-assertion or publicity not infrequently deny to their possessors the recognition due them. Nothing can be more flippant than the common query, "What does he amount to?" true worth being seldom seen by dull perception and the rule-of-thumb measure of the man.

I have in mind a notable instance, where a man of rare merit, cast aside because of a momentary lapse on his part, eventually, through kindliness of heart and a knowledge of human nature, was nobly rescued from oblivion. But for that friendly sympathy and unshaken faith, one who today is conspicuous for his virtue and fidelity and whose superior talents have been notably displayed in service to his benefactor, might have passed to his grave, unappreciated and unknown.

Geoffrey St. Bridges has said, in effect, that many a deserving aspirant after success has failed because of want of a little trust and encouragement. The material business world is too apt to judge of fellowmen as of dumb cattle, observing only that which directly appeals to the outward, arithmetical estimate. It is a lasting reproach to one assuming to be an intelligent Christian gentleman that the accidents of sensibility and unworldliness of character, even a passing slip of morality, should irretrievably obscure a struggling honest heart.

How rarely are we understood; how few people
really know us—
Oh yes! You know me—so at least you say,
Basing your knowledge on a laugh or tear,
An idle jest, a thought in which appear
The hidden elements of character. Alway
You think me so light-hearted that today
When my uplifted countenance did wear
A look of tranquil joy thou said'st, "Lo, here
A sunny stream o'er which bright glances play."
Art thou then so ill-schooled in circumstance,
So ignorant of men, thou couldst not see
The rocks beneath or hear the knell that sang
In secret chambers of my soul—perchance
The solemn undertone of agony,
The sighing of the spirit's voiceless pang?

—

The reader is not asked to believe that the following incident is an actual fact, and he need not laugh, unless he feels like it.

A lady was attacked the other day by a violent internal pain. It didn't yield to simple remedies and, so, she called the doctor. The doctor was puzzled, and admitted it; then sent for the x-ray-man. After a little manipulation the woman was asked whether she missed a watch. Why, yes, she had and still did—and then the mystery was a mystery no longer. She had swallowed the watch, which luckily was a diminutive one; and there it was, having the time of its life.

Then the woman remembered having lately dropped to sleep with the watch in her hand. After running down as far as it could, the watch had stopped. The doctor said they must get it up, some way, and the bright assistant suggested that they wind it up.

"It is an unusual case," remarked the doctor.

"You are mistaken," rejoined the owner; "It's a regulation open-face."

"Perhaps we could get it up in minute particles," suggested the assistant.

"No second-hand suggestions," growled the doctor, as he knit his massive brow.

So then they went to work in earnest and the watch was presently restored into the hands of the gratified lady.

And now when she wants to time her slumbers she holds a clock—no matter how heavy time hangs on her hands.

—

The modern tendency to specialism in medicine has elicited wide discussion. On the one hand, it is claimed, and quite plausibly, that the field of present study has become too vast to be compassed by the sphere of ordinary practice; that, in fact, the startling advances of scientific investigation in our day have necessitated restriction of professional effort and compelled attention to special departments of study, in order to assure practical success for any individual. On the other hand, it is with equal plausibility held that particular devotion to a single phase of the medical art tends to a narrow vision of its possibilities and a limitation of the general knowledge an acquisition of which insures the most permanent results.

It is somewhat difficult to endorse either one of these methods exclusively. It undoubtedly is true that many socalled specialists are wofully deficient in the principles of medical knowledge, without which the field of inquiry is naturally deprived of its professional breadth, not to speak of its usefulness to the laity.

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That there are certain obstinate conditions not to be thoroughly understood or competently treated without long and arduous investigation of their peculiar character, cannot be denied. Yet, precisely here we find a lamentable deficiency in our schools, which in a few years' course of study claim to produce the expert. A comparatively slight acquaintance with bacteriology, for example, confirms the student in the belief that he has mastered the science; whereas he has but crossed the threshold of it, and years of patient industry will be required to render his talent that of an adept.

Great, indeed, is the achievement of the laboratory, in commanding its control of difficult details; yet, liberally speaking, it should be regarded as only a single step in the attainment of professional truth, marvelous in its accomplishment, but of itself only subservient to the larger learning which constitutes the highest medical progress.

The duty of the physician and of the surgeon should be regarded as two-fold: while bestowing requisite attention upon the minutiæ of their callings, each should regard with conscientious care the ampler demands of a profession whose cardinal impulse is, to acquire the broadest view and the most complete equipment possible for mitigating human misery.

—

Beam kindly on the anxious earth,
Autumnal suns, and with your light
Dispel the shadows which have grown
From sorrow's starless night.

Is not man still the infant god
That trod the sacred Academe,
And ever has been climbing still
Unto the heights supreme?

O days with golden light aglow—
O years remembered with regret;
Upon our glorious heritage
The sun shall never set.

AMONG the BOOKS

BLAKISTON'S PHYSICIANS' VISITING LIST

The Physician's Visiting List for 1914. Philadelphia: P. Blakiston's Son & Co.

We are just in receipt of this annual visitor, which has become a necessity to thousands of physicians. In addition to the account-book section, the little book contains much useful information, including a physician's dose book, table of weights and measures, and simple directions for the treatment of emergencies.

The book is made in different sizes: that for twenty-five patients weekly costs $1.25; for fifty patients, $1.50; for seventy-five, $2.25, and for one hundred, $2.50, the last three being in two volumes. There are also perpetual editions and monthly editions, the prices ranging from $1.00 to $1.50.

This little book is so well known that it needs no special recommendation. It is one of the best of its kind.

MARSHALL: "DISEASES OF THE EYES"

Diseases of the Eyes. By C. Devereux Marshall, F. R. C. S., surgeon to the Royal London Ophthalmic Hospital. London: University of London Press, Hodder & Stoughton, and Henry Frowde. 1912. Price $3.75.

It hardly would seem that there is any particular demand in this country for a new work on diseases of the eyes, in view of the large number of most excellent treatises already in the field, together with the rather limited extent of the field itself. Indeed, one would think that even in England the writing and publishing of such a book must be largely a work of supererogation.

However, it is hardly the function of a reviewer to speculate upon that aspect of the matter, but rather to express some sort of estimate of the intrinsic value of the book itself. In the present instance, this is a much more pleasant task to perform than the other; for, concerning the merits of Dr. Marshall's little book there can, we think, be no difference of opinion. He is in every way fitted to write a modern, practical manual on the subject; and he has amply justified his qualifications. One criticism we venture to offer. Since the book is frankly devoted to ocular diseases, and the author could not treat extensively in it of the subject of refraction, it seems he would have done better, possibly, to leave refraction out altogether; or, still better, to have discussed errors of refraction only as they are connected with diseases of the eye. Still, when all is said, the little book is a pleasing and helpful one and deserving of high commendation.

DUBOIS: "ORIGIN OF MENTAL DISORDERS"

The Psychological Origin of Mental Disorders. By Paul Dubois, M. D., professor of neuropathy in the University of Berne. Translated by Edward G. Richards, M. B., A. M. New York and London: The Funk and Wagnalls Company. 1913. Price 50 cents.

We confess to a sensation of disappointment in the perusal of this little monograph, chiefly because of the vagueness, and even triteness, of its treatment of the matter in hand. For genuine nub and clean-cut method it is not for a moment to be compared with its English counterpart, Hart's "Psychology of Mental Diseases." Indeed, it does not strike us as being the work of a scientist at all, but of a philosopher, and a rather visionary philosopher at that; just as we have always held Dubois himself to be more of a poet than a physician.

Not, that the book is without a certain practical value, of course. Even poets and philosophers have their utilitarian value, little as the general public suspects it, which consists chiefly in the general and transcendental illumination that they shed upon ways and truths undreamed of by the myopic scientist.

Dubois is a dreamer of dreams and a seer of visions. His teachings have no very great

clinical value, as they stand; but they point the way to fields of scientific experiment, and open up possibilities of clinical advancement. Even so, we could wish that he had been a little more sequential in working out his philosophy and a little more definite in indicating the connecting link between the philosophic and the clinical. His psychiatry reminds us of Flammarion's astronomy and Poincaré's mathematics—big and imaginative, but a trifle nebulous.

STEVENS: "DISEASES OF WOMEN"

Diseases of Women. By Thomas George Stevens, M. D., B. S., M. R. C. P., obstetric surgeon to St. Mary's Hospital, London. With 202 illustrations. University of London Press, Hodder & Stoughton, and Henry Frowde. 1912. Price $5.50.

This is another of the University of London series of medical publications. And right here we cannot refrain from suggesting that the same consideration of superfluity applies to a new work upon gynecology that ere this we have pointed out in regard to one on diseases of the eye—perhaps it applies even more strongly. On this side of the Atlantic, at least, we are simply flooded with gynecological textbooks and manuals, almost *ad nauseam*. Possibly in England the subject is not quite so overdone.

However, when we turn to the other aspect of the matter— the intrinsic merits of the text itself—we are happy to find that in this respect also the cases are parallel. We have nothing but praise for the subject-matter of the book, its arrangement and presentation. Two things strike us with particular force: first, the marvel of comprehensiveness and condensation which the author has achieved, and, secondly, the pleasantly deceptive excellence of the illustrations.

We do not know that we have ever seen, in any book, so much information in so small a space, yet, all clear and adequate. And considering that the illustrations are none of them in colors—which one has grown to believe a necessity in these days—it is a delightful surprise to find that they portray their subject with a graphic fidelity that we hardly thought possible in plain black ink.

WOODWARK: "MANUAL OF MEDICINE"

A Manual of Medicine. By A. S. Woodwark, M. D., M. R. C. P.; junior curator of St. Bartholomew's Hospital Museum; physician to the Royal Waterloo Hospital and the Miller General Hospital for Southeast London, Edinburg, Glasgow, and London: Henry Frowde and Hodder and Stoughton. 1912. Price $3.75.

This "manual" of about four hundred pages evidently is intended primarily for the medical student, yet, it contains so much information in so small a space that it will be found extremely convenient as a work of reference for almost every physician. It is particularly complete as regards help in diagnosis, while the arrangement and presentation of diagnostic facts makes it very convenient. Thus, for instance, in introducing the section on diseases of the bronchi and lungs, there are several pages of explanation of the technical terms employed, and the normal and abnormal sounds are carefully described. This makes the succeeding pages of descriptive matter perfectly plain, even to a reader who knows very little about medicine.

Everywhere throughout the book the facts are assembled in such a way as to make them easy of reference; as, on page 111, where there is a footnote giving all the usual causes of clubbing of the fingers; so, also, on page 163 the reader is told in a few words how to feel the pulse and how to interpret and apply the information thus obtained. Information of this character is of the utmost value in differential diagnosis.

The principal defect of the book, we should say, is the small amount of space devoted to the subject of treatment. In fact, from the therapeutic standpoint, the book has very little value. However, the author was limited in the matter of space to devote to this phase, and possibly may be excused on that score.

BROOKS: "PATHOLOGY"

General and Special Pathology. For Students and Practitioners. By Henry T. Brooks, M. D., former professor of pathology at the New York Post-Graduate School and Hospital. With 525 Illustrations. Philadelphia: The F. A. Davis Company. 1912. Price $5.00.

As the author publicly admits in his preface, this book is really an elaboration, in English, upon the German work of Professor Robert Langerhans, of Berlin. Since the death of Langerhans, which took place in 1905, there have been, of course, many additions to and changes in the store of pathologic knowledge, which made it necessary to recast and augment the subject-matter of his classic textbook; and this is the

task which Dr. Brooks has set himself. How well he has succeeded, time and a more or less extensive use of his book alone can show. A somewhat hurried glance through its pages, however, leads us to the opinion that it will be found a worthy s ion of the parent work.

Nor must it be supposed that this work lacks in originality, for the author has managed to embody in it a large amount of his own personal experience and to infuse into it, throughout, his own strong individuality. Moreover, the arrangement is good, and the condensation (for it necessarily is condensed) shows fine discrimination.

In its physical features the book, in the main, is excellently done—especially in the matter of illustrations. On the whole, the book is a worthy contribution to the literature of the subject and should prove a very usable textbook for the student and the practitioner.

DE LEE: "OBSTETRICS FOR NURSES"

Obstetrics for Nurses. By Joseph B. DeLee, A. M., M. D., Professor of Obstetrics, Northwestern University. Fourth Edition. Philadelphia and London. The W. B. Saunders Company. 1913. Price $2.50.

The issue of the fourth edition of this excellent little work of Dr. DeLee's apparently finds the public for which it was written—that is to say, the nursing public—just as eager for its reception as it was when the original edition was first announced. And no wonder; for it still marks, as it did mark then, an unparalleled departure in the field of obstetrical literature.

For one thing, there is no other book, to our knowledge, which gives to the trained nurse such frank, outspoken, scientific information upon this subject. There has always been a lurking idea that you must not tell the nurse too much about such things. DeLee has fearlessly broken away from this ancient tradition and taken her frankly into his professional confidence. Again, the book is like DeLee himself—modern, alert, clean-cut, shorn of all old-fogeyisms, consistent, not afraid to carry all the principles of modern medical science to their ultimatum in the practice of his craft.

Hence, Doctor DeLee's own personal success, and, furthermore, the popularity and effectiveness of his book. This is not written for the doctor, to be sure, but we venture the assertion that there is more in it than the average doctor knows or practices; and, besides, the nurse depends largely upon the doctor for her literature, so that it is well for the physician to acquaint himself with books written for the trained nurse.

SCUDDER: "SPECIFIC DIAGNOSIS"

Specific Diagnosis: A Study of Disease, with Special Reference to the Administration of Remedies. By John M. Scudder, M. D. Twelfth Edition. Cincinnati: John K. Scudder. Price $3.00.

Doctor Scudder is the prophet of Eclecticism, and his book has for years been, and still continues to be, the bible of the Eclectic physician. We are warned on the title page that the book, although now reprinted by request, has not been revised since 1890—, from which we gather that the author finds, in the main, no reason for receding from or adding to his position of twenty-five years ago. This position is best told by the author himself, in the words of his preface, from which we quote:

"The first lesson in therapeutics is, that all remedies are uniform in their action. The conditions being the same, the action is always the same. We learn to know the healthy man by exercising all our senses upon him. Then we want to learn the diseased man in the same way and compare him with our healthy standard. Then we study the action of drugs upon the sick, and when we find them exerting an influence opposed to disease and in favor of health we want to know the relation between the drug and the disease—between disease expression and drug expression."

This is the relation which Dr. Scudder seeks to establish between his materia medica and his symptomatology—with what convincingness, we leave our readers to determine.

SCHOTTELIUS: "BACTERIA"

Bacteria. By Dr. Max Schottelius. Translated by Staff-Surgeon Herbert Geoghegan, R. N. Second Edition. London: Henry Frowde, and Hodder & Stoughton. 1912. Price $3.50.

So far as our personal acquaintance with medical literature goes, this is the only book in print which contains within two covers (at least within two such small covers so close together) the entire lore of the bacteria.

It is inherently impossible, of course, for any book on this vast subject to be absolutely up to date, since bacteriology is constantly assuming a more complicated aspect, new

methods supplanting the old and new paths of research constantly being disclosed. Furthermore, as the author wisely points out, there is always a danger attaching to summaries of this character, in that they may delude the reader into a belief that he has a larger and deeper knowledge of the subject than he really does possess, and, in consequence, lead him to form hasty judgments upon difficult biological problems.

Nevertheless, it is very desirable that one should have a coherent, comprehensive understanding of the science of bacteriology as a whole, and this is what Doctor Schottelius aims to supply in this little book.

The present edition has undergone a thorough revision and many essential alterations. Two entirely new chapters have been incorporated, one on immunity and protective vaccination, and another on protozoa, both rendered necessary by recent advances in these directions.

STITT: "BACTERIOLOGY AND PARASITOLOGY"

Practical Bacteriology, Blood Work, and Animal Parasitology. Including Bacteriological Keys, Zoological Tables, and Explanatory Clinical Notes. By E. R. Stitt, A. B., M. D. Third Edition. Philadelphia: P. Blakiston's Son & Co. 1913. Price $1.50.

This is a presentation of the subject of bacteriology from an angle totally different from that of the book just reviewed. As its name implies, Doctor Stitt's work is a practical working-manual for the laboratory-man; and it is about as complete and helpful a one as we ever have seen. That its value is recognized and appreciated by the profession, is amply evidenced by the fact that already it has passed into its third edition since its first appearance in 1909.

Not the least valuable of this book's features is the clinical interpretation that is offered of the various laboratory findings. We could wish that more of our laboratory manuals paid a little attention to this phase of laboratory work. We are in the habit of calling this method of diagnosis "clinical diagnosis," principally, we are forced to conclude, because it has so little or nothing to do with the bedside.

The crying need of the general practitioner is a system of clinical interpretation that will make contact between laboratory tests and bedside diagnosis. We repeat, one of the most praiseworthy features of Doctor Stitt's book is that it makes this contact. As with the book by Doctor Schottelius, so with this one, a new chapter has been added on the protozoa, in accordance with the demands of recent research.

TURNER AND CARLING: "TREATMENT AFTER OPERATION"

Treatment After Operation. By William Turner, M. S., F. R. C. S., and E. Rock Carling, B. S., F. R. C. S.; with a Chapter on the Eye, by L. V. Cargill, F. R. C. S. University of London Press, Hodder & Stoughton, and Henry Frowde. 1912. Price $3.75.

Here, at least, is a character of book of which there are none too many on the literary market. Doubtless the recent enunciation and pretty general acceptance of Dr. Crile's theory of surgical shock will stimulate the recording experience and observation in the treatment of patients in the pre-operative and post-operative periods, which may eventually develop into something like a definite and trustworthy literature on the subject. For the present, though, it must be confessed that the operation itself largely overshadows the care of the patient before and after the event, and worth-while information as to the principles and details of such care is all too meagre.

For these reasons, we welcome with open arms the experienced and successful surgeon who will suspend his scalpel long enough to tell the rest of us something about the incidental phases of his surgical work which unquestionably contribute to his success—and which may turn out to be not so incidental, after all, but, on the contrary, decidedly essential. This is precisely what the authors of this book have done. It may fitly be said to treat of the therapeutics of surgery, which forms no mean part of the surgical procedure.

A goodly quantum of well-executed illustrations visualize some of the technical lessons that can, hardly, be imparted in any other way, while an adequate index enables the reader to make ready use of that which the book holds of interest for him.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERY

ANSWER TO QUERY 5908.—"Tinea Circinata, or Ringworm." I think I can suggest to T. D. F. (May, p. 461) a never-failing and simple remedy for ringworm, one that for years I have intended to publish, and which, I am sure, is better than burning rags on steel, as recommended by G. D. S. of Stonington, Conn., in the August issue. This is my method:

Take a large sheet of writing-paper (foolscap), roll it up into funnel-shape, using two pins to fasten together. Cut the mouth of the funnel even and then stand the funnel upside down on the back of a china plate. Now set the apex on fire and let the funnel burn evenly down to the plate. After blowing off the ashes you will find a yellow oil collected on the plate. This oil is used to apply all over diseased area, and you want to be sure to burn enough paper funnels to produce oil sufficient for this purpose. One application does the work, as a rule. I do not know what its composition is, but suppose the oil contains some form of arsenic and a little creosote produced from the burning paper and condensed inside of the cone. —Tenn. L. L. N.

[Thank you for calling our attention to your method of obtaining this "oil of steel," and adding your testimony about its efficacy. Your explanation seems reasonable. Most paper nowadays is made of wood pulp, and from this, as the products of destructive distillation (combustion), there may result pyroligneous (and, possibly, acetic) acid, phenols, cresols, creosote (i. e. from certain woods), and other empyreumatic bodies. You would find it rather tedious, of course, to analyze your "oil of steel;" for its composition would vary materially under different circumstances, according to the wood-fiber used, the method of manufacture of the paper, the temperature generated, and the amount of smoke thrown down upon the cold plate.

We have found creosote a very excellent remedy in various parasitic skin diseases, and especially a substance sold as pyrolignine has given us good results.—ED.]

QUERIES

QUERY 5957.—"Elephantiasis." E. H. A., Illinois, has under observation a case of elephantiasis in a large fleshy woman about fifty years of age, the disease so far being confined to the legs. The Doctor prescribed calcium sulphide. He now wants to know whether there is anything that may help.

Really, doctor, the term "elephantiasis" merely means a permanent swelling of the tissues, the underlying cause being blocking of the lymphatics, i. e., interference with the backflow of lymph.

The filaria—the blood-infesting nematode parasite—is rarely encountered in this country; we must, also, differentiate between tropical elephantiasis and the milder form, usually involving the leg, observed here. In the milder degrees of elephantiasis in the leg, systematic and careful massage and bandaging from the toes upward will prove beneficial, provided small doses of arsenic sulphide are prescribed at the same time. We should suggest arsenic iodide, 1-64 grain, after each meal, alternating week and week about with the triple arsenates. It is just possible that liquor arsenii compositus, Bar-

clay (arsenous acid, and iodides of strontium and lithium), in 5- to 10-drop doses, well diluted, three times a day, will prove even more efficacious. Castellani has employed and recommends repeated injections of thiosinamin, either into the affected extremity or deeply into the glutei.

Under any circumstances, massage and bandaging from the toes upward are essential. Recently, injections of a vaccine of a diplococcus found in the blood have been recommended. These injections are to be continued until the diplococcus disappears.

It is plain that we cannot offer definite suggestions in view of our limited information on existing conditions.

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QUERY 5958.—"Chronic Rheumatism and Arthritis Deformans." C. O. R., New York, is treating a woman of 45 who has been in bed six months with what is considered either chronic rheumatism or arthritis deformans. Our correspondent requests us to tell him how to make a positive differential diagnosis and to outline the best treatment for either condition or for both.

"Would the local hyperemic treatment," he inquires, "do any good, and, if so, how best secure effect? What do you think of massage for the joints or the back? If you think osteopathic treatment is indicated, please describe the exact method of procedure. Do you think Abrams' book would help me out in this? If you think it well to induce local hyperemia in the joints, name the necessary things with which to do it and exact instructions for employing them; also instructions as to massage and local and internal treatment.

"The woman cannot take a step and has not been able to do so for about six months. Almost all the joints are involved and already considerable deformity exists. Her general condition was very bad, but now is better, owing to tonic treatment. The joints are enlarged and the knee-joints are quite painful to the touch or when manipulated. Her back did hurt considerable, but not much at present."

Now, frankly, doctor, you have asked us to write a small volume on treatment, and, much as we should like to treat the subject-matter of your letter in detail, the extent of our correspondence absolutely makes this impossible.

But, really, you do not even supply clear-enough clinical data to enable us to make a definite diagnosis, so that it is not possible to advise for or against osteopathic treatment. Even were it likely to prove beneficial, we cannot, of our own knowledge, "describe exactly the indicated manipulations." Probably the book by Abrams on "Spondylotherapy" would help you materially; you might also study Murray's "Practice of Osteopathy."

You ask us to tell "how to make a positive differential diagnosis between chronic rheumatism and arthritis deformans, and to name the best treatment for either condition, or both."

Arthritis deformans (rheumatoid arthritis) is a term used to describe cases of arthritis displaying a marked tendency to chronicity, with permanent changes in the joints or periarticular tissues. Those forms of arthritis, the etiology of which is clearly established, i. e., gonorrheal arthritis, are excluded.

With our present uncertain knowledge, cases of chronic arthritis must be classified in purely clinical groups: (1) Polyarticular arthritis deformans: (a) chronic and subacute; (b) acute. (2) Senile, or localized, arthritis deformans.

Polyarticular arthritis deformans is the commonest form, parts most subject to early attack being the hands. Corresponding joints or both sides are involved, and there is a tendency of the disease to advance from the extremities to the trunk. The number of joints involved varies, but generally are the same on both sides.

In one form, the joint assumes a spindle shape, and the bony landmarks are defined with difficulty. The joints may contain fluid and be hot and tender to the touch. Again, they may have a doughy, semielastic feeling. This is the subacute form of polyarthritis occurring frequently in young patients.

In some chronic cases, the joint is enlarged, not symmetrical, and nodular outgrowths appear. Motion is limited, painful, and accompanied by a considerable creaking. The joints rarely contain fluid.

Bear in mind that pain is a variable symptom; it may be acute or almost absent; and, on the other hand, muscular wasting is invariably present, and the deformities resulting from combined joint and muscular changes are marked. The deformities of arthritis deformans are not peculiar to this disease, however, and may be seen in other chronic joint affections.

No hard and fast line exists between the acute, subacute, and chronic forms. Frequently, however, the former resembles rheumatic fever, with sudden involvement of many joints, swelling of the synovial sheaths,

and moderate fever. There is less migration than in acute rheumatism, the affected joints do not return to normal, and there is a tendency to involvement of the smaller joints.

Young women from twenty to thirty years of age are most often affected; not infrequently the disease arises during pregnancy.

In chronic rheumatism, we must differentiate by the early history, absence of joint deformities, and so on. However, it is not always an easy matter to differentiate between chronic rheumatism of the joints and socalled "arthritis deformans."

The modern conception of the latter disease demands that the treatment should be directed toward the discovery of the source of infection. The mouth should be investigated for carious teeth, and pyorrhea, if present, must be treated. The tonsils must be examined, and not infrequently tonsillectomy is called for. Any crypts or pockets containing accumulation of debris and microorganisms must certainly be cleaned out. The nose and ears must be examined for suppurative processes and the gastrointestinal tract cleaned out and kept clean. Free purgation and colonic irrigation nearly always are beneficial. The pelvic organs in women, the urethra in men, and bladder and kidneys in both sexes must be investigated for possible sources of infection, especially the colon bacillus.

In every case, if improvement does not follow appropriate treatment of the suspected source, the bacterins should be given a trial.

The drugs of most value are arsenic and iodine. Liquor arsenii compositus (Barclay) has proven of particular service. The sulphocarbolates and a virile culture of the bacillus bulgaricus have been used with benefit. One of the most satisfactory combinations is guaiacol carbonate, calcidin, and nuclein. This may be given in alternation with liquor arsenii comp. Calomel, podophyllin, and bilein should be administered every second or third night, with preferably a saline the next morning. The salicylates frequently are useful. Our conception of "rheumatism" and the most effective treatment therefor has been outlined fully and often in these pages.

Before we go further into this matter, doctor, let us suggest that you send a specimen of urine (4 ounces from the 24-hour output, stating total quantity voided) to a pathologist for examination; at the same time give us a clear clinical picture, noting particularly the condition of the pelvic organs, area of hepatic dulness, character of stools, condition of tongue, digestive capacity, and so on. Examine nose, ears, mouth, tonsils, and so on, minutely, and also name and describe fully the condition of the joints involved. Is there any possibility of specific infection?

QUERY 5959.—"Hematuria." G. C. S., Wisconsin, reports a specimen of urine voided by a patient whose first morning urine contains blood, he says. The first attack occurred twenty years ago, and the condition continued, despite treatment, for three months. Another such attack occurred some five years later, and thereafter was repeated every two or three years up to a year ago. Now, about two weeks ago, the hemorrhage commenced again and this time it does not stop. There is no pain at all, and appetite is good, but there is loss of flesh, strength, and ambition. The patient, who is 52 years old, has a very sallow look. No kind of tumor could be discovered in the vicinity of the kidneys or bladder or in the abdominal cavity, our correspondent writes.

The report of the pathologist shows indican and skatol present, together with blood, pus, squamous epithelium, and a few renal cells; also calcium oxalate, uric-acid crystals, and urates. Unfortunately, there is not given us a very clear clinical picture; also, there does not seem to have been made a thorough examination of the prostate gland, the seminal vesicles, deep urethra, and other possible seat of the bleeding. Here are a few general considerations.

Hemorrhage from the anterior urethra may be recognized readily, the blood oozing from the meatus independently of micturition; when the lesion is beyond the cut-off muscle, blood is voided with the urine. The two-glass test will show blood in both glasses, the second containing more than the first, while effort at expulsion brings out any residual fluid present in the posterior urethra.

In hemorrhage from the prostate gland or the prostatic urethra, the urine is bloody, by reason of the blood regurgitating into the bladder. If you will wash the bladder through a soft-rubber catheter until it is clean and then fill it with water, the fluid that then escapes through the instrument while in place will be entirely free from blood; while, if the remainder, when voided naturally, contains blood, then the source of the hemorrhage is below the vesical sphincter.

Hemorrhage inside the bladder reddens the urine throughout, although, if collected by the three-glass method, the last portion will contain relatively more blood.

Bleeding from the ureters is characterized

by the presence of elongated clots, unless the lesion be close to the vesical termination.

Before we can diagnose hemorrhage from the kidney, all other sources must have been excluded. However, in such cases, the blood is uniformly mixed with the urine; that is, if we make the three-glass test, we shall find that the urine in each glass is uniformly tinged. Moreover, in renal hematuria, microscopic examination reveals, besides the blood, casts and renal epithelia; the red blood-cells appear washed-out and are observed as swollen, barely perceptible disks. The absence of casts, in this case and presence of but few renal cells would lead us to exclude hemorrhage from the kidneys. Hence, the probable sources then would be stricture, prostatitis, cystitis, prostatic congestion or hypertrophy, or vesiculitis; possibly calculus.

What about the area of hepatic dulness; condition of tongue; character of stool? Make a thorough examination and give us all the light you can, and it will give us pleasure to make more definite diagnostic and therapeutic suggestions.

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QUERY 5960.—"The Preferable Anesthetic for Children." M. F. M., Georgia, wishes a little information about the use of ether as a general anesthetic for children. He inquires: "Is it advisable to use ether for a child when preceded by ethyl chloride, and, if so, how would one proceed? I was taught in school that chloroform was the better anesthetic for children. If ether can be used with ethyl chloride, what is the age limit? How much ethyl chloride is it safe to give an adult?"

As you are aware, chloroform is not regarded by the majority of American anesthetists as favorably as is ether; on the other hand, in England and on the Continent, chloroform (administered by the drop-method) is considered the most desirable anesthetic for children.

For a great many years English surgeons have resorted to the use of very cumbersone and complicated apparatuses for the administration of chloroform and ether; as a matter of fact, the more simple the procedure, the better the results.

This writer, who has given chloroform many hundreds of times, merely folds a napkin or thin towel so as to form a shallow cup and hold this over, but not in contact with, the patient's nose and mouth, and drops chloroform upon it every few seconds, in slightly increasing amount, until anesthesia is produced; then reduces again to the smallest possible quantity necessary to maintain unconsciousness. Properly given, half an ounce of chloroform (sometimes even less) will be sufficient for somewhat prolonged operations.

Ethyl chloride is satisfactory especially for short surgical procedures; but it can not be administered properly in an open inhaler, too much air being thus inhaled and anesthesia, therefore, develops so slowly that a condition of excitement may be caused and render the patient difficult of control. A closed cone placed over the mouth and nose, the ethyl chloride being sprayed through an aperture at the apex upon a few thicknesses of gauze, or else a Gebauer, Luke or Clover inhaler will prove satisfactory.

It is impossible, of course, to state (with any degree of exactitude) the amount of ethyl chloride necessary to produce anesthesia. Much depends upon the characteristics of the patient, the amount of air inhaled, and the method by which the vapor is administered. However, from 1 to 2 Cc. suffice, as a rule, to produce anesthesia in children; from 3 to 4 Cc. will anesthetize most adults; but 5 Cc. may be required for stronger men and alcoholics. When chloroform is given carefully by the closed method, anesthesia is produced in from ten to thirty seconds without causing any discomfort; but if the vapor is pushed too freely holding of the breath may occur, while muscular rigidity not infrequently proves troublesome.

It must not be forgotten that the effects of the drug often are more marked after it has been withdrawn (for but a short period only) than while it is being actually inhaled. Should the respiration become stertorous, the administration of the chloroform must be stopped or more air be admitted. The pulse then usually is slow and the blood pressure falls.

Some authorities claim that the use of ethyl chloride prior to the administration of chloroform is inadvisable, on the ground that the transition from a drug that stimulates respiration and lowers blood pressure to another that depresses respiration and the circulation as well presents elements of danger. Still, this writer has administered ethyl chloride and chloroform many times, without provoking any unfavorable symptoms.

It is probable that ethyl chloride, satisfactory anesthetic as it is, is about as dangerous as chloroform. The mortality rate under it is from 1 : 2000 to 1 : 3000. Such accidents as do occur generally develop with startling suddenness.

Finally, it may be stated that the chief indication for the use of ethyl chloride is in

minor operations in children, to whom it may be given in the cone or by placing a few folds of lint in the palm of the hands, which is held cupped over the mouth and nose, the ethyl chloride being sprayed upon the gauze through the fingers. In this way, anesthesia is rapidly produced and there is little or no danger of an excess of the drug being administered.

Keen, in his very exhaustive chapter on anesthesia (Keen's "Surgery," Vol. V), states that the employment of ethyl chloride prior to the use of ether or chloroform is not to be regarded with favor. "In cases," he says, "in which the early effect of ether is dreaded and the anesthetist is tempted to employ ethyl chloride, it should be remembered that the chances for the patient are better with ether alone than they are with ethyl-chloride-ether sequence; and it would, therefore, seem that it would be wiser, unless peculiar circumstances exist, to use ethyl chloride for short operations, and chloroform by the drop-method or ether in more prolonged procedure."

Do not forget, doctor, that a very small dose of H-M-C, hypodermically an hour before operation, and a very few drops of chloroform properly administered will produce perfect anesthesia in even young children. This writer has circumcized several youngsters under this method, during the past two years, and in every instance the outcome was all that could be desired.

QUERY 5961.—"Circumcision of Infants." M. F. M., Georgia, desires information regarding certain details about the circumcision of infants which he can not find in the books at his command. Thus, he wants to know at what time, and how, the operation should be done; whether any stitches should be taken; and what amount of prepuce is to be removed.

While this writer will, for the benefit of this and some other readers, outline his own method of performing circumcision upon the infant, it may be said that the operation is described in practically every textbook on surgery. Before proceeding, though, we may remark that, as a matter of fact, the majority of operators at present prefer splitting the prepuce dorsally rather than cutting it away; the result being everything that could be desired, while the operation practically is bloodless and almost painless. The procedure is simplicity itself, as well be seen from its description.

First spray the anterior surface of the prepuce with ethyl chloride and then inject, drop by drop, a few minims of a sterile solution of stovaine along the line of the proposed incision. Now, with a grooved director, lift up the prepuce and with a sharp bistoury or scissors slit it *almost* down to the corona; then place one stitch exactly in the angle of the incision and two or three stitches on each side, horse-hair or very fine catgut being preferred. Be sure that you get even union between the mucosa and the skin. Now put on a moist antiseptic compress and leave it for twenty-four hours, then dress with any good dusting powder. If the prepuce is redundant, a "U" shaped incision may be made by snipping of the corners, left by the vertical cut, with a slight curve. The foregoing extremely simple procedure permits of the rolling back ot the prepuce and its satisfactory retraction in after-years.

Complete circumcision may readily be performed as follows: Draw the prepuce well forward beyond the glans (preferably under chloroform-anesthesia—a very few minims suffice), apply a clamp, then remove the tip with a single sweep of a sharp bistoury, or, if preferred, use scissors. You will find the mucosa untouched. Slit up the prepuce on the dorsal surface to just above the corona, trim off any tags on each side, then approximate and suture the skin and the mucosa with four or five stitches: the first one at the frenum, the second immediately opposite on the anterior surface. A very fine needle should be used, of course.

As you may know, the Jewish "mohel" (the rabbi) pulls forward the prepuce to the utmost extent, removes the superfluous tissue with a sharp razor-like knife, then tears the mucous membrane with his thumb-nails, allowing it to retract. No sutures are placed, and a piece of gauze saturated with red wine is the only dressing. Even under such circumstances very satisfactory results are secured.

We believe that we are not justified in torturing an infant. It is true that the amputation is quickly done, but the pain must be severe for an instant; moreover, the placing of sutures is not exactly a pleasant procedure. Therefore, in order to save the child from suffering and prevent possible accidents, it is well to give a few drops of chloroform and, so, be able to work leisurely and unmolested.

Under ordinary circumstances, the dorsal incision is decidedly preferable. With this, you can either suture, without doing further cutting, or trim away the desired amount of skin and mucosa from each side.

As a rule, it is desirable to snip the frenum and save the individual lots of trouble in after-years; but do not forget the presence of an artery in this location, and you may save yourself trouble by incising between two ligatures. This writer frequently cuts the frenum, however, avoiding the artery. This is not a difficult matter if yuo make tension upon the part, insert a tenotome edgewise, turn the edge upward and outward, then sever the superposed tissue. Under such circumstances the artery will be back of the blade.

For a detailed description of the various operations, see Remondino's "Circumcision," Wharton's "Minor Surgery," Keen's "Surgery," or any good modern work on surgery.

QUERY 5962.—"Chronic Nephritis." W. S. W., Georgia, is treating a patient, forty years of age, for chronic desquamative nephritis. There is a considerable amount of albumin in the urine. The man, of vigorous habit, goes about freely, but is beginning to tire easily. Complexion rather sallow. Edema of legs comes and goes. He has been treated by three or four physicians with but little benefit. Our correspondent wishes us to give him, "in detail, the very best up to date treatment," indicating dosage and frequency of everything suggested, and outlining diet—all the particulars, and, make it plain."

We are sorry, doctor, that you did not give us clearer clinical data. Success follows treatment of the pathological conditions present in the individual—not a "named disease."

In chronic desquamative nephritis, the symptoms vary materially, and they develop insidiously. Usually edema appears about the ankles in the evening; while in the morning the eyelids are swollen. The urine may be slightly increased, decreased, or remain normal as to quantity, with specific gravity corresponding; albumin always is present in moderate or large amounts, with at first epithelial casts, but which later become fatty or hyaline. However, if properly managed, this disease need not shorten life.

The diagnosis is established by the presence of albumin, and of epithelial and hyaline casts which later become fatty or hyaline; further, by progressive anemia and hydremia. If additional proof of the disease is desired, methylene-blue may be given, this aniline-dye being arrested by the nephritic kidney, instead of promptly eliminated with the urine, as in health.

The patient must be restricted to skimmed milk alone, a half glass every four hours, night and day, half an hour to be consumed in the "mastication" and ingestion of this quantity. At first the patient will feel as if this were not enough to sustain life, and then he may be permitted to take more if he will "eat" it in the exact manner described; but biliousness soon will warn him of excessive consumption, and he will settle to about the amount suggested. The milk is to be taken with a teaspoon, and each spoonful held in the mouth and "chewed" until thoroughly incorporated with saliva. As the milk begins to grow distasteful, it may be varied by substituting fresh, nonrancid buttermilk, junket, whey or kumiss in similar proportions. Once a day, instead of milk, an equal quantity of freshly pressed fruit-juice may be taken. Water may be drank also if the dropsy does not forbid.

This regimen is to be sustained until the albumin has been absent in the urine for one month, when we may begin cautiously to add small quantities of the simplest of other foods, such as toasted stale bread, zwieback, crackers, rice, and other carbohydrates. The fruit-juices may be increased also, and a little coffee allowed. Following these, if albumin does not reappear, the order in which foods are to be added is: fresh fruits and vegetables, but not any that contain volatile oils, like cress, or any oxalic acid, like tomatoes; further, eggs, fish, oysters, chicken, turkey, beef, mutton. But pork, veal, dry beans and peas, as well as cheese are for a long time to be prohibited. Alcohol is to be forever left out of the nephritic's diet-list.

This writer believes that the daily use of from 1 to 3 grains of arbutin, and as much benzoic acid, has an influence in gradually restoring the diseased epithelium to health; and this is the only direct, or dominant, medication advised. High arterial tension is not common, but when present demands the addition of just enough veratrine to restore normality in this respect. Low tension and debility may require sparteine or digitalin. Anemia calls for iron phosphate, a grain a day, in the drinking-water. Basham's mixture is advised in every textbook, but we have never been able to find a physician who could testify to benefit derived from it.

Beyond this, the treatment is that of symptoms and of intercurrent maladies. The presence of red blood-cells in the urine is met by the arbutin, amply. The bowels must be swept out daily by a morning laxative saline, for toxins from retained feces cannot but harm the diseased renal tissues.

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